ILLUSTRATIONS, &c.

OF THE

BOARD OF AGRICULTURE,

SHEEP AND WOOL,

Poor Laws,

PORTUGAL,

AND

LATE SCARCITY.

Printed by S. Gosnell,
Little Queen Street, Holborn.

BOARD OF AGRICULTURE

ON THE

SHEEP AND WOOL

OF THE

ISLANDS &c.

THE SYSTEM

FOLLOWED DURING THE TWO LAST YEARS BY THE

BOARD OF AGRICULTURE

FURTHER ILLUSTRATED.

WITH

DISSERTATIONS ON THE GROWTH AND PRODUCE

OF

SHEEP AND WOOL,

AS WELL SPANISH AS ENGLISH.

ALSO,

OBSERVATIONS UPON, AND A NEW PLAN FOR,

THE

POOR, AND POOR LAWS.

TO WHICH ARE ADDED

REMARKS ON THE MODES OF CULTURE AND IMPLEMENTS OF HUSBANDRY,

USED IN

PORTUGAL.

AND AN INQUIRY INTO THE CAUSES OF THE

Late Scarcity,

AND MEANS PROPOSED TO REMEDY IT IN FUTURE.

By JOHN, LORD SOMERVILLE.

ILLUSTRATED WITH PLATES.

London:

PRINTED FOR W. MILLER, OLD BOND STREET.

1800.

Jos: Banks

BL

DISSERTATIONS,

&c.

HE, who is called to a public situation, and holds that public situation for any length of time, whether it be attended with profit or with loss, whether its duties be well or ill defined, whether circumstance and the pressure of the times call for, or deny him, the assistance of Government, is alike responsible to the Public.

The Author of these pages having been abroad, and consequently, at present, holding no such office, ventures thus, on his return to England, to trespass

on the patience of his countrymen; thinking it right to leave no just ground for misunderstanding that, which his duty to the public at different times led him to suggest: being resolved on all occasions to perfect, what he has begun. So situated, he feels it incumbent upon himself to speak more plainly in completion of that methodised line of conduct he laid down, as being most conducive to the success of that national establishment—the Board of Agriculture.

Under circumstances the most propitious, abundant difficulties must occur to impede such an undertaking. To those, who most reflect, they will appear almost insurmountable. The prejudices and superficial knowledge of some, the thwarted self-interest of others, the casualties of seasons in perfecting experiments, however founded on reason and practical knowledge, all tend to confound him, who shall attempt to take the lead in such an institution. But when it fell to the lot of any man to take the labour-

ing oar at a period, when, in prudence, he could not divert the attention of our Legislature from objects of more immediate, though not of greater, necessity, when, in addition to this, he laboured under the difficulties of a grant, not great in itself, that grant half consumed in salaries, and for the subsequent eighteen months involved in debt, much could not be expected.

To explain, and put beyond the reach of misconstruction, that system, on which the Board has for two years acted, to express a most sincere regret that the means of doing more could not be obtained, is the object of the first part of this Treatise.

It may be imagined, that the idea of such an institution is of modern date, coëval perhaps with the institution itself; but this is not the case. The idea was suggested by an old writer, Samuel Hartlib. It was so much approved of as to obtain for its author a pension, not inconsiderable in those days, of 100*l.*

per annum, from Oliver Cromwell. Since which we find Hartlib's idea still farther enforced by a very spirited and classical writer, who suggested the very appellation, in a work published in 1764, by which it is now chartered, the Board of Agriculture.

The utility, the dignity of such an institution, is not to be doubted. But to produce all the required effect, it must be closely followed up, and by men well grounded in the science, who have the means of detecting and separating that, which is useful from that, which is visionary; who have grafted theory on approved practice. In this case it may obtain the confidence of husbandmen, whom, in great part, it is meant to enlighten; but without that confidence, and without legislative support, great benefit cannot result.

The first of these it was the author's chief object to regain; the latter, in such a moment of warfare, and struggle for existence, it was ill judged, perhaps,

to require. The word *regain* may need some explanation. The first movement of the Board, at its institution, was to take an agricultural survey, or report, of each county; an excellent preparatory measure, if cautiously and judiciously undertaken. The result of this was much good effect, where the idea was not altogether novel, as in great part of North Britain; but much ill effect in some of the central and southern parts of the island. Whether it was, that some of these reports were attempted by men, who were strangers to the counties, or otherwise unfit, or that farmers absurdly conjectured, that these reports were intended by Government for some purpose of taxation, is not clear; but the effect notoriously was that of sealing up their lips, and creating in their minds no common jealousy of the institution itself. This it was absolutely necessary to do away, or the whole object of the institution was defeated. Indeed we find it hinted at in the Preface to the corrected Survey of Lincolnshire, by the Secretary to the Board. The

funds of this institution being involved in debt, deeming it ill-timed to solicit the active interference of Parliament, and confidence being destroyed in those, whom it was very much the object to enlighten, it was hardly probable that any man, however anxious to succeed, could be fortunate enough to fill such an office with satisfaction to the public, impossible he could fill it with satisfaction to himself.

The system contained in the first Address to the Board in May 1798, and in two others subsequent to it, not forming part of the volume of Communications to the Board, the author takes the liberty of giving them a place here; that, by recording what he has advanced, he may save himself abundant trouble hereafter in combating what he never did advance. For now that we are all farmers, and many of us setting up as masters in the trade, without serving any previous apprenticeship, it can hardly be a matter of wonder, that we run wild a little, and that no small

confusion and error are the result. The first Address was as follows *:

Address to the Board of Agriculture, on its Meeting on the 8th of May 1798; by Lord Somerville, President.

BEING called to the Presidency of the Board of Agriculture, an honour unsolicited on my part, and a situation to which I may perhaps be found unequal, I think it my duty, as briefly as possible, to lay before the Board the plan I venture to recommend as the one hereafter to be adopted; in full confidence, that, when put into execution, turbulent and ill suited as the times are to the peaceful pursuits of husbandry, a very short period only will be required, to provoke the hearty co-operation of practical farmers; and the benefits derived to the whole kingdom from this institution, will be obvious to understandings the least enlightened, and to minds the most prejudiced.

Feeling strongly the necessity of ascertaining the state of the funds of the Board, and the demands on it, being altogether unacquainted with the particulars, I issued the necessary directions

* It is almost needless to observe, that, in outlines such as these, *matter*, not *manner*, was the author's object. Well-turned periods, therefore, and high-sounding declamation, must be looked for elsewhere. If these addresses were intelligible, the Author is content.

to the clerks, who, from official documents, and with the assistance of the late President, have given in the following statement:

Funds.

	£.	s.	d.
Cash in hand, and to be paid soon —	3,102	14	1

Debts contracted by Order of the Board.

Printing — — — —	1,498	14	5
Engraving — — — —	525	16	2
Surveys — — — —	415	0	0
Sundries — — — —	1,081	13	5
	3,521	4	0

Statement of probable Expenses, given in by Sir John Sinclair.

Surveys — — — —	405	0	0
Printing — — — —	949	0	8
Sundries — — — —	338	5	9
Total	1,692	6	5
Debts known to the Board — —	3,521	4	0
Funds, as specified before — —	3,102	14	1
Balance to come out of the grant of 1798 —	418	9	11

	£.	s.	d.
Brought forward — —	418	9	11

As a considerable part of the debts, above included, are recently contracted, and part not given in, for work at present in hand, it is proper for you to observe, that on this account you seem to be in a more favourable situation than I expected; for this balance of 418*l.* would not be demanded of the Board, till long after funds came in much more than sufficient to liquidate it.

This would be the state of the Board, if there were no other claims admitted:

But the statement of Sir JOHN SINCLAIR adds the sum of — — — —	1,692	6	5
Making, with the former balance, to remain a charge on the grant of 1798 and 1799 —	2,110	16	4

As to any determination with respect to the future publications of the Board of Agriculture, I shall endeavour to bow with submission to the better judgment of the majority of its members; but having hitherto, on all occasions, expressed my doubts as to the advantages resulting, for many years at least, to the country, from profuse publications on husbandry, however meritorious in themselves, without the more immediate aid and support of practical husbandmen, I trust I may here do so without offence; and I am the more inclined to do it, because numberless plans of inquisitorial

search into the resources of the kingdom, have, by the ignorant and suspicious, been falsely attributed to Government, through the channel of this Board, and much of its unpopularity (for unwillingly I must say, it has not in the country been a popular institution), may be assigned to this cause. Something of this also may belong to the effect produced by the county reports, or surveys, done on the Board's account at its first establishment; a measure novel in itself, and however valuable in the end, because novel, tending to create doubt and alarm.

It remains, then, with the Board, to decide on the propriety of carrying on, at a heavy expense, its voluminous detached publications, as before; or, to publish annually one well-digested quarto volume, from the infinity of materials now in its possession: much as the market has been glutted with these articles, this volume would probably pay its own expense—the modern criterion, and no bad one perhaps, of the intrinsic merit of any work whatever. The Board being eased of this burden, 1,000*l.* annually can well be given in premiums of 50*l.* or perhaps with more effect, of 100*l.* each, for discoveries and improvements in the most important and leading points of husbandry, giving the preference to such as, by ocular demonstration, rather than by certificates, can be ascertained *.

* The committee for the distribution of which might consist of three London butchers, three experienced farmers, sworn to be impartial and just in their decision, and of the President and other Members of the Board.

B L

Gold medals may be offered annually for the best treatises on practical modes for bettering the condition of the poor without adding to the poor-rates; for improvements in cottages, &c. probably the productions of magistrates, and gentlemen conversant in country affairs, above the want of a premium in money: to such, a gold medal might be an object of attention, and certainly would be a small token of gratitude for the services so rendered to their country.

I beg leave to recommend also, that ten, or rather fifteen premiums of 10*l.* each, should be given to labourers in husbandry, as objects of imitation in others, and well-earned rewards to themselves for long and faithful services, and for decently and religiously educating, without assistance from their parishes, the largest families; certified by the clergyman of the parish, a magistrate, and by the member for the county forwarded to the Board. In this case, imposition can hardly be attempted.

The good resulting from the distribution of premiums of this sort, although on a very inferior scale, as given by the Bath and West of England Society, and the consequent effect produced on the minds of the common people in the neighbouring counties, is beyond all calculation. The Bath Society cannot take umbrage, and the Board of Agriculture need not be ashamed of adopting so excellent an idea, although suggested, and most successfully practised, by another.

Should I be so fortunate as to see these propositions carried into execution, I may be bold enough to assert, that they will attract the attention, and call into action, the willing aid of men bred to the profession, who now almost to a man stand aloof and refuse it.

A sum fully adequate to the purpose, if managed with economy, will remain for the payment of salaries as before, to the secretary, the under-secretary, and the clerks; for house-rent and taxes, for the housekeeper's and servants' wages, and the incidental expenses of the Board, as appears by the statement calculated by the Committee of Expenditure, which amounts to nearly 1,500*l.*

	£.	s.	d.	£.	s.	d.
For salaries, house, and office	—	—		1,500	0	0
For liquidation of the debt annually	400	0	0			
For ten premiums of 100*l.* each	1,000	0	0			
For fifteen premiums of 10*l.* each	150	0	0			
				1,550	0	0
				3,050	0	0

N. B. The experience of all societies, as to the adjudgment of premiums, leaves no doubt whatever, that the unclaimed ones will be abundantly sufficient to defray the extra expenses.

The balance of existing debt, as sanctioned by the Board, appears to be 418*l.* (not including those speculative engagements

hinted at by the late President).—By the application of 400*l.* annually, this debt will be liquidated in one year, provided the Board shall not think fit to adopt the engagements proposed by the late President; in which case the sum of 1,692*l.* is added to the debts of the Board: and if so, five years will be required to liquidate it. At the expiration of which period, in conformity to the decided opinions of numbers of our countrymen, who invariably, from the first institution, have kept their eyes steadily fixed on the Board, expecting some great practical exertion, I suggest the propriety of hiring a tillage, or convertible farm, of not less than 300*l.* a year, to hold out, as an example to the nation, the most vigorous system of modern substantial improvements in husbandry. Grazing experiments can fortunately be ascertained on the farms of others, for the attention of the most eminent will be caught by the magnitude of the premiums here proposed, as animals can without inconvenience present themselves in person to the examination of the Board. Not so with facts to be demonstrated in tillage: were a field of wheat or turnips to walk to the door in like manner, it would be a matter of no small surprise and annoyance to Piccadilly and its vicinity; and herein consists the much superior necessity of the Board taking under its immediate direction, and within an easy distance of the metropolis, such a farm as may without hazard pay its own expense, *with exception to that small portion of it allotted to speculative experiments*

upon points unascertained; to cover which expense, and the accidents unavoidably arising to the very best managers from climate, and untoward casualties, 500*l. per ann.* would be at all times more than sufficient. As I should never propose any scheme of this sort without a perfect conviction in my own mind beforehand, that it might and should be executed within that expense (and it may be added, that it is a plan long expected by the nation at large), I by no means press this on the attention of the Board at present, nor indeed could I—being a remote consideration, but without doubt forming an essential link in the chain of the future operations of the Board. I may state my firm conviction, that this measure can be executed without loss, and will be fully consistent with the spirit and essence of this establishment, as well as a national object of improvement and instruction. I pledge myself, that if I may, as an individual, be allowed the honour of interfering in the management of such a farm, it shall, under the blessing of Providence, pay its rent.

I have stated what, after much consideration, appears to me the best application of the grant, and am sanctioned in this opinion by the concurrence of many experienced and able men.

——*Si quid novisti rectius istis*
Candidus imperti, si non his utere mecum.

And here, after bearing the strongest testimony to the zeal on all occasions, and to the uncommon politeness, with which the late President allowed the Board of Agriculture to trespass on his domestic comforts, by occupying for so many years his abode, I cannot but congratulate the Board, on finding itself at length possessed of an habitation it can call its own: more especially as the house, previous to its being engaged, as to size, expense, and situation, met with the perfect approbation of every member of the Board, who was requested to inspect it for that purpose.

There can be no doubt but that every present out-standing debt, on the score of printing, &c. should be put into an immediate train of payment, and every expense hereafter incurred, regularly and promptly discharged. This, in all cases, is the best of policy; but in an institution like the Board of Agriculture, it is essential and appropriate; for husbandry, every man knows to be a ready-money trade; no long bills or per contra creditas—a leathern purse, or a sample bag, is produced, and the account balanced in a moment.

In holding out, as I shall ever endeavour to do, to the serious attention of the Board of Agriculture, the absolute necessity of obtaining, and in pointing out the only mode whereby can be obtained, the assistance of those well versed in this science, it is possible that men of literature—and many, I am proud to say, the

Board has to boast of—may lend an unwilling ear to what I say; but they will remember, that men's prejudices must be considered; that to work any reformation, men must be taken as they are, not as they ought to be, and that, as yet, *farmers are not a reading class of people.* In Scotland indeed, from superior education, some men bred to husbandry may read, and, if their judgments be good, fortunate it is, that they do read; but, as I before said, farmers, generally speaking, are not in this island a reading people: the weekly Journal of the county is the probable extent of their literary pursuits.

One may fairly conclude, there is no member of the Board of Agriculture, who would wish, that to foreigners of any nation should be denied the knowledge this institution may hold out; but if what I have advanced be true, and no man studying the nature and character of farmers, will say it is not true, Parliament, when voting 3,000*l.* annually for the Board of Agriculture, in its legislative capacity has to look principally, if not altogether, to the improvement and prosperity of the *British* husbandman. In farming, practice may succeed without theory, but theory cannot support itself without the aid of practice: a plain man can maintain his family on the husbandry of his ancestors; but rare is the example of a book-farmer making his rent; and more rare, of such making money in his business.

Treatises on agriculture have trodden on the heels of each other; the market has been overstocked; and many a publication, deserving a better fate, for this reason lies unsold on the shelf: in short, suspend in a degree, for a time, the operations of the press---let practice, well-grounded practice and theory, go hand in hand together, and this institution will be triumphant.

Extract from the Committee of Expenditure, May 25, 1798.

Resolved, That it be recommended to the Board, as the opinion of this Committee, that all printing (except the volume of Communications*), and all surveying, be stopped till the meeting of the Board next autumn.

Took into consideration the President's proposal for giving premiums, and establishing an experimental farm:

Resolved, That it is the opinion of this Committee, that the establishment of a farm, or farms, will be a right object for the Board to undertake, when a proper one can be found; such a farm, or farms, appearing to be the first of the two objects; but not to preclude the propriety of premiums, when further and sufficiently considered.

* The quarto volume, recommended by the President in his address to the Board.

Extract from the Minutes of the Board, May 29, 1798.

Resolved, That the President be requested to make the necessary inquiries for providing a farm, or farms, according to the last resolution of the Committee of Expenditure.

Resolved, That the Board approve of the idea of giving premiums, and do pledge themselves to the public, that they mean, within a convenient period, to make various offers, of such magnitude as may be highly conducive to the encouragement of the national agriculture.

Read a letter from Mr. Robinson, his Majesty's Bailiff, on Mr. Davis's method of cleaning smutty wheat, and attended the experiment, Mr. Davis being in waiting. In nine minutes he cleaned the wheat received from his Majesty's farm, so as to make it saleable at a common price; but friction in the same degree, without his powder, would not have the effect. Mr. Davis informed the Board, that the expense of cleaning a load would not, to a farmer with proper conveniences, cost more than *7s. 6d.*

The Secretary receiving instructions from the President to show the samples to a mealman, he had an opportunity of laying them, directly, before Mr. Joseph Bell, miller, flour-factor, and baker, of No. 86, Watling Street, who, on examining them carefully,

pronounced that the black wheat was not worth more than 35*s.* a quarter;—that the sample treated with friction only, was worth 40*s.* but still fit only for *blues*, of which gingerbread is made;—but the sample fully wrought with Mr. Davis's powder, was a very good sample of wheat, and now worth about 54*s.* a quarter.

Resolved, That it appears to the Board, that the discovery of Mr. Davis is very practicable on any scale, effective, highly useful, and important; and that he deserves the encouragement of all farmers.

From hence it appears, the grant from Parliament being 3,000*l.* *per annum*; a debt being already contracted of 2,000*l.* or somewhat more; and salaries of 1,500*l.* *per annum* to be paid when due; with the casual and unavoidable expenses of such an office considered, that no active scheme of operation could be embarked in, nor, what is more to the farmer's mind, as will be demonstrated hereafter, could rewards of any magnitude, for services done to the

public, be offered, for the next eighteen months at least*.

As it was the author's duty, so it was his fixed purpose to notice, but without personally offending any, such practices in husbandry as wanted correction; and to regain the confidence of farmers by such obvious improvements in implements, as would both put money in their pockets (the best object in farming), and, at the same time, bespeak some little knowledge in that trade, which the wisest of ancient and modern authors tell us, a man's whole life is not equal to perfect. For this purpose the author, in one of his Addresses to the Board, presumed to treat, in a cursory manner, of the principles of a Drag-cart, and Drag-waggon, the descriptions and drawings of which are to be found in the second volume of Communications to the Board, page 415.

* An institution was established six months afterwards, by a subscription among the farmers themselves, called "The Smithfield Society," for the purpose of giving premiums to those, who produced, under certain regulations, the best fat cattle.

This principle of Drag coming to the knowledge of that celebrated mechanic, Mr. Cumming, he, in his Treatise on Wheel Carriages, has spoken of it in terms, which would amply repay the inventor. It was a reward, indeed, beyond his hopes; for, having devoted his labours, such as they were, to the public, he did not deem himself justified in taking out a patent, the too common reward for such inventions. The author also proposed, that a gold medal, the first ever offered by the Board of Agriculture, should be presented to Mr. Ducket, of Esher in Surry, for his divers improvements in husbandry implements; particularly for his invention of the skim-coulter, by which the trenching system, so much approved in gardens, is admirably adapted to field culture also, on a principle most valuable, because most simple. The medal was presented to Mr. Ducket. The consequence of which was, that in the space of a few months an unexpected letter was received from a most respectable farmer in Suffolk, of the name of Rodwell, recording, in hopes of a similar reward, as he himself expressed it, an

instance of the greatest exertion of a tenant, that has ever occurred. (See Communications to the Board of Agriculture, vol. ii. p. 451.) The effect these rewards produce on the minds of professional men may be better understood by one fact like this, than by pages of speculative congratulation.

The following was the author's second Address to the Board:

Address to the Board of Agriculture, on its Meeting, the 27th of November 1798, *by the Right Honourable Lord Somerville, President.*

PROCEEDING to state, as it is my duty, the progress made during the recess, I must be allowed to congratulate the Board of Agriculture on the resumption of its labours, at a period when well-earned success, and triumph unexampled, hold forth the surest prospect of returning peace, and consequent industry. Nor indeed is this congratulation irrelevant to the subject; for the British character being awakened, that vigour, which has stemmed the torrent of devastation, and rescued from slavery surrounding nations, will be directed to an opposite, but no less interesting purpose—the complete subjugation of our soil, the

encouragement of our manufactures, the extension of our commerce and wealth: and internal security and happiness unbounded will result.

When I did myself the honour to address the Board, I thought it my duty to obtain a statement of its funds; I then strongly urged the necessity of calling in the debts of the Board, and putting those most pressing into immediate train of payment. It appears, that since then a very considerable part, no less a sum indeed, than 2,679*l.* 7*s.* 6*d.* of the *admitted* debts, has been liquidated; and that the remainder will in a few days be discharged; and it is with extreme satisfaction I am authorized to say, the grants of Parliament will in future be issued as soon as voted.

The Funds of the Board stand thus:

	£.	s.	d.
Cash in hand, and to be received shortly from the Treasury — — —	3,288	6	10
And the expenditure for the half-year's establishment of the office, and debts recognised by the Board — — — —	2,918	1	3¼
Balance	370	5	6¾

From the foregoing account it will appear, that although three Reports have been printed during the recess, and charged in the

statement against the Board, yet there is a balance of 370*l.* 5*s.* 6*d.* in its favour: but it is to be observed, that claims have been made to a very considerable amount, which, if admitted, will not only swallow up the balance, but will leave a considerable arrear: the admission or rejection of these, it is to be hoped, will be a subject of early consideration, and it will hereafter, perhaps, be remembered, that debts, warily entered into, are easily paid.

Materials for the annual volume, according to the plan adopted by the Board, are in forwardness: and, with the approbation of the several authors, in each volume such extracts from one or more county Reports will be included, as may tend to promote, rather than diminish, the sale of the Report itself. In addition to those sources of information the Board was before possessed of, circular letters have been addressed to men the most distinguished for practical and improved husbandry, from which, without doubt, additional knowledge will be derived.

Measures are also taking, to ascertain the cause, and, if possible, the cure, of that most fatal disorder, the goggles, rapidly gaining ground, even among the poll, or natt breed. By the joint labours of such men as Dr. Jenner, the celebrated author of the Treatise on the Variolæ Vaccinæ, and Mr. Bridge, of Dorsetshire—the former as much distinguished for his skill in anatomy, as the latter is for his knowledge in husbandry—more insight will in a

few years be had into the causes and cure of diseases incidental to animals, than, without the joint operations of such men, would be produced in as many centuries;—nor will their labours be confined to this particular subject. And here it would be ungrateful to pass over unnoticed, the benefits already derived to husbandry, from the attention paid to it by Doctors Ingenhouz, Pearson, and Fordyce. Assistance, from men so distinguished, must cheer us with the best hopes of success.

There are subjects, which call for your most serious attention; namely, the ruinous system of expense, that so much prevails in out-door farm-buildings; the mistaken principles of draught, and the ostentatious parade of horse-teams. To the landed proprietor I particularly address myself; for on his close attention to this point, his rents very much depend. Ruinous is the repair of overgrown barns and superfluous out-houses, not to mention the first cost. It is not to be understood, that buildings in tolerable repair are to be pulled down, to make room for others more economical in their construction: that would be sorry husbandry.—But when new buildings are required, attention should be paid to models formed on the sure basis of simplicity and economy. A model of this sort the Board has sometime been in possession of; I mean that of a barn, the floor of which is drawn up like a draw-bridge, and, when not in use for thrashing, is a convenient out-house, in which any thing can be kept; or for soiling cattle.—Or that of a

barn, which is fast gaining ground in one of the western counties. It may be thus described: advantage is taken of a declivity towards the south; seven or eight feet of earth dug away; this bank, faced with stone, forms the north wall; the side walls are solid, and the south arched. The floor forms the roof to the ox-stalls, which, being the whole length and depth of the barn, forms a very warm and commodious shelter for cattle; and if a stream of water can be introduced into troughs from the hills above, no harbour being left for vermin under the floor, we may venture to say, that few roofs were ever more usefully employed, than at once to cover two buildings so needful in husbandry, oftentimes so expensive. The dimensions of a barn of this sort are as follow: total length 50 feet; height of back wall, besides the foundation-wall, 18 feet 6 inches; breadth 20 feet. It has two cribs on each side, four against the back-wall, and holds eight oxen, or, if divided into stalls, ten. The expense (timber not included) 60*l*. Where corn is kept, as it ever ought to be, on stadles, a great quantity can be thrashed in a barn of this size annually, and as much store-corn contained in it, as ought ever to be at one time put within the reach of rats and mice, and damp walls. Waggons and carts may be kept under the floor of granaries on the same principle, and thereby expense and waste in roof-timber is much curtailed. These barns are particularly applicable to farms, where thrashing-mills are not admissible.

To the simple and effective system of draught long established in Ireland and Scotland, must the attention of South Britain be directed. Mr. Bakewell decidedly preferred the Irish Car to every other carriage whatever, for the common purposes of farming work; and the powers of the Leith cart in Scotland are too well known to need much comment. Suffice it to say, that the one-horse carts are plain in their construction, and cheap; that they carry from 18 to 24 cwt. each, in a country by no means level, and that one man attends two carts. What a contrast to the unwieldy horse-teams of the southern counties, with a carter enjoying numberless perquisites, and an overgrown fellow, called a mate, to assist him! "What are you doing?"—"Nothing, Sir."—"And what are you doing?"—"Why, helping him."—If landlords will not open their eyes to such management, they merit a comfortable loss of rent, and they have it. It may be allowed me to say, I have bestowed on this subject much attention, especially in the construction of a drag-cart, particularly adapted to mountainous countries; differing also in many particulars from any yet invented, being so assured by the President of the Royal Society, A. Young, Esq. and many others. On trial, its success has equalled my best hopes: its cheapness and simplicity is obvious.—The motion of each wheel by friction, on the outside of the fellies, can be more or less impeded in going down hill, at pleasure, and the load thrown back and fixed there, so as to take off any given quantity of weight, even in the steepest de-

scents, from the necks of the oxen, or the back of the shaft horse. The wheels are low, consequently stronger, and the cart, therefore, more easily loaded; its weight, iron axle-trees included, 5½ cwt. to be worked by two oxen only of a small size, in yokes and bows, or two three-year old steers of the best working breeds: it was intended to carry 22 cwt. but found on trial equal to 25 cwt. in any country, however steep, where ruts are not unusually deep. The next size, heavier and stronger, supposed to weigh 6½ cwt. and to be equal to 35 cwt.; and the third and strongest, intended for two good five-year old oxen, to weigh 7 cwt. 40 lb. and fully equal to carry 45 cwt. One man will drive two carts: a yoke of oxen in each cart. Infinite loss has obtained in the present wasteful system of draught, from the neglect of apportioning the power, as well as applying it judiciously, to the weight, with which it has to contend.

Painful I suppose it must be others; certain I am, that it is painful to me, to touch on any thing, that might savour of egotism; but I ought not here to omit expressing my gratitude for the indulgence and candid trial his Majesty has lately been pleased to allow, of a plough in Windsor Park (see Mr. Kent's correct statement of the fact), as well as for a desire, expressed by his Majesty, to witness the effect of another double-furrow plough, differing in no respect from the former, except in the principle of draught. The plough is nearly finished. Wishing, if possible, to assert

nothing, and to prove every thing, I shall only say, that at present I believe it, from its construction, better able to contend with flinty and rocky soils, than any swing plough can do. By an alteration in the construction of the beam, from that invented by Mr. Tugwell of Gloucestershire, however trifling, I might have steered clear of his principle of draught; but it suits me rather, by adopting it as it stands, to pay his ingenuity the tribute I am persuaded it merits; conscious, that, after minute investigation, I could not improve on it, or produce another so good. There yet remains to prove the specific power requisite to work different ploughs, which can hardly be done without the aid of a machine, and this I have made it my business to obtain, whereby it will be proved, whether the preference is to be given to cast iron, or wooden mould-boards, of the same form. Comparisons will also be made between each of these double-furrow ploughs, shaped in every respect alike, carrying a different sized furrow: this will be done shortly, and the result made known, if required. Aware, that in the introduction of any novel practice, the trial of an hour, or six hours, or a day's work, would be inconclusive, I trust I shall establish by continued work, within the reach of the Board's inspection, that four young oxen, in either of these double-furrow ploughs, shall attempt nothing in a short exertion, which they cannot in a fair course of labour with ease maintain. My belief is, that they will plough two statute acres per day, in five hours and an half, and that they will maintain

this with ease five days per week, for any reasonable length of time. In short, whoever may invent or improve, double-furrow ploughs must be carried into general practice; they apply equally to horse as to ox teams in stirring earths (thwarting) by extreme dispatch of work; they enable us to take advantage of that critical moment, on which the success of crops most materially depends; will do away those absurd and ungrateful repinings at the dispensations of a wise and benign Providence, for the want of that seasonable weather, which, on its coming, their own ineffective system denies the use of; and consistently with every principle of mechanics, it will probably appear, that the concussion given to earth by the action of the first, and taken immediate advantage of by the second share, may break any adhesion of the soils, and consequently lessen the resistance: so it is infinitely easier to overturn a carriage in motion than when standing still, although the angle of elevation in both cases is the same. Desultory trials, as I have before said, and those for a day's work only, must necessarily be vague and inconclusive, when made at any distance from each other, in different soils, and under very different circumstances, oftentimes occasioned by accident; but when that national farm shall be established, which I had the honour last spring to propose for your consideration, and the Board of Agriculture had the goodness to approve, all these difficulties will be done away. Ploughs might be tried with accuracy, their qualities for different soils and works ascertained, and instead of

the contradictory reports furnished by various countries, the truth established, and accurately stated to the public. The object, I trust you will agree with me, is so important, and the sums saved by it in farming labour so immense, as to justify every exertion, and to call forth the attention of every husbandman in the kingdom.

I beg leave to offer to the Board's consideration a correct and candid statement of the comparative expense between his Majesty's horse-teams, as once used, and the Hereford, Devon, and Glamorgan ox-teams during the year 1797; and by reference to which, it appears, that of 65 horses, and of 107 oxen, there is a balance in favour of the latter of 513*l.* 15*s.* 6*d.*; or on the same comparative average statement of each animal singly, the horse at 20*l.* 9*s.* *per ann.* and the ox 7*l.* 18*s.* 6*d.* ditto, there appears a balance in favour of the ox of 13*l.* 0*s.* 6*d.*; not to mention the difference in favour of oxen in the prime cost, and wear and tear of the tackle, if worked in yokes and bows; the casualties and ailments, to which horses are more peculiarly liable; the little attendance required by the ox; and the consideration, that if an accident happens to the horse, he is worth no more than his skin, whereas in this case, an ox in any tolerable working order, is ever worth half his former value. It belongs to me only, from my own knowledge, to say, I have never found his Majesty's oxen otherwise than in good working condition; an instance rarely to be

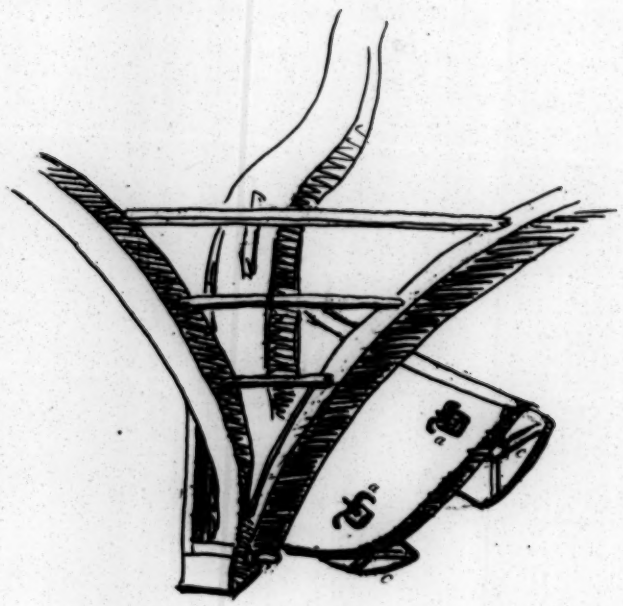
found, except in countries long habituated to their use; that not a single horse being employed in so great a concern, the road work and labour must be systematic, often severe; and that, where 50 three-year old steers are every year brought into labour, at the age of four and five worked hard, and at the age of six years fatted off, if profit is to be made in tillage husbandry, it must here be found.

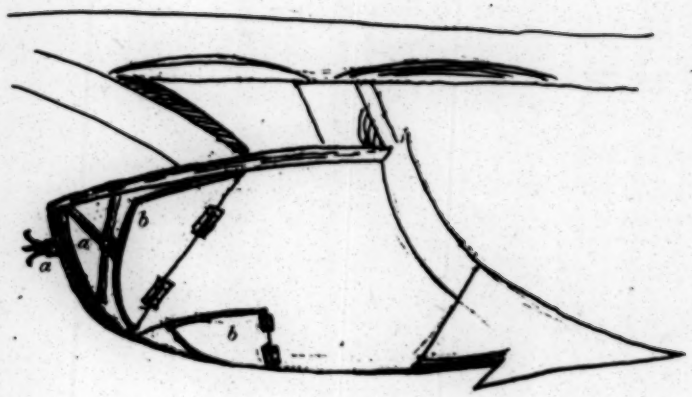
Prejudice apart, any system, which embraces economy, and, what is of more importance, dispatch in labour, must be held up, under whatever form it may present itself; to enforce the good policy of seizing the moment, when ground is in temper for working, is the basis, on which crops very much depend. By the joint efforts of precept and example to stimulate men to new efforts, by crying down with impartiality systems founded in error, and holding up to public view such as merit imitation, the Board of Agriculture will fulfil the purpose of its institution, and stand high in the estimation of every man, who loves his country.

Of that taste for expense, which has lately prevailed in out-door farm buildings, and the policy of again bringing it within proper bounds, there cannot

7

B L





a. a. a. The screws, which advance or withdraw the moveable Mould-plates.

b. b. Moveable Plates.

c. Ribs, strengthining the Plates.

d. Grooves, sunk in the Mould-board to receive the Ribs when the Plate is withdrawn.

exist a doubt. It was the President's duty to notice any practice tending to promote this, from whatsoever quarter it might come. Such doctrines might not be popular with tenants, who rarely pay for repairs, but fully merited the attention of landlords.

Of these two-furrow ploughs it would be superfluous to say much more. Their construction and subsequent effect upon trial have been stated in the Communications to the Board. But as the author was not allowed, before his departure from England, the common privilege even of unfortunate authors, that of correcting his own pages, he is under the necessity of quoting such few passages, as may further illustrate the subject; more especially as the whole, in its present state, is hardly intelligible; and that part of it, which relates to the *moveable mould-plate*, totally so, from the want of a front and back view of the plough, to mark the exact point, where the screws, spassing through the *mould-board*, are attached to the *mould-plate*. (See Plate *.) The principle of this moveable plate

may not at first catch the attention of every reader; but it has found stout advocates in ploughmen, because it saves their right arm much trouble in wedging and hammering mould-plates, and their right leg much exertion in attempting to tread flat that furrow, which the plough had left on an edge.

To qualify any two-furrow ploughs for broad work of all descriptions, breaking up leys included, these plates are indispensably necessary. In single ploughs they are almost equally so. All single ploughs ought to work on their own base, *close at heel*, as the technical term is, or the furrow must be irregularly laid; but two-furrow ploughs must absolutely do so, or they will instantly be thrown out of work *. Every thing,

* A writer on these subjects, and a very voluminous as well as distinguished one, was holding cheap two-furrow ploughs of all descriptions, for every purpose of fallowing whatever; but allowed them to be excellent for ley ground, because they made such dispatch of work. This gentleman, sacrificing all to his favourite system of one-bout ridges, must have forgotten the whole race of barley and turnip lands, and has treated with contempt the whole system of clearing ground, its stirrings (cross-ploughings) and last earths. For no man in his senses would think of throwing these up into one-bout ridges, as he contended for.

that was supposed to be effected by these ploughs without injury to the cattle, both as to the number of oxen, or the power equal to its weight of draught, has been justified by successive trials in the turnip-fallowing of last summer, in the ley-wheats of last autumn, and in the barley sowing of this spring. (See Paper on Ploughing, in the second volume of Communications to the Board, page 418.)

We next have to hint at a recommendation to the Board of Agriculture for the purpose of establishing provincial farming societies over the whole kingdom, without which no systematic communication could well be kept up between the national Board, and those plain unlettered men, who form the bulk of English yeomen. The necessity of such links in the chain must be obvious to all; and, where leading men have exerted themselves in their several circles, they have succeeded in such establishments. With pleasure we see them forming also in Ireland, once our sister kingdom, but now, to the triumph of those, who had the

boldness to plan, and wisdom to bring to maturity such a measure, forming a part of that imperial kingdom, henceforth probably doomed to take such a distinguished lead among mankind. If we see, as undoubtedly we do see, great and rapid improvements resulting from such institutions, how much more will not that country profit, when its tranquillity shall be established, and as our fellow-labourer of old, Walter Blithe, in his treatise, "The English Improver improved," predicted of his brother soldiers, when he says, in the words of Isaiah, "They shall beate their swords into ploughshares, and their speares into pruning-hookes."

SHEEP AND WOOL.

IT is now time to refer to the third Address to the Board, which was as follows:

Address to the Board of Agriculture, on the Subject of Sheep and Wool, on the 14th of May 1799, by Lord Somerville, President.

TRUSTING I shall not be found prodigal of your time and attention, I take the liberty of recommending in the most urgent manner to your notice, the following propositions, fully persuaded that the subject, in the most direct manner, embraces the best interests of the commerce and agriculture of this nation; and that speedy success will be the result. Whilst in common with others, who have to propose measures, bearing the stamp of novelty, I am prepared for that spirit of investigation and doubt, so natural to a reflecting people, I have little to fear from this proposition, because the interest of one class of our manufacturing countrymen is not upheld against another, nor is the landed stirred up in opposition to the commercial interest; but without disturbing any established practice, I am enabled to hold to their view, by patient and steady exertion, the reality of mutual benefits, beyond all possibility of contradiction. If, in so doing, the plans of some

few monopolizers of a foreign article, which they vainly imagined indispensably needful to our manufactures, have been deranged, and a damp thrown on their selfish speculations, they will find as little commiseration as they merit, and I shall sit down contented under their ill will.

The political situation of Spain may be such as to shut out, or at least materially increase the present difficulty of importing her wool into this country; in which case, it is a matter of the utmost national importance, that the fine woollen trade of Great Britain should suffer nothing in reputation. That this is speedily to be effected, I have no doubt; indeed the patterns now before my eyes so absolutely prove the fact, that as an individual, bound in a particular manner to support the agricultural produce of my own country, I am resolved, from Midsummer-day next, never again to wear superfine cloth, or kerseymere, any part of which shall be of foreign growth. It would doubtless be advisable to leave, uncontrolled, the import of raw articles manufactured here; for in a great commercial country like this, of what consideration is that million of money, annually paid for the import of Spanish wool? But the timely interference of those, whose duty it is, will probably teach the Hamburgh dealers in Spanish wool, to be cautious how they attempt any great advance of price, as we suspect they mean to do, preparatory to which, is the advance of 2*s*. per yard on superfine cloths: and this, without any thing like

blame attaching to the clothiers, may be attributed to the limited quantities imported, and advanced price of the article; a damaged sample of which sold, very lately, for 4*s*. 6*d*. per lb.*

To anticipate and ward off so severe a blow, levelled at one of our most valuable manufactures, to recall farmers' attention to the quality of wool, as well as the carcase, is a labour worthy of the Board of Agriculture; and must meet the heartiest concurrence of every woollen manufacturer whatever.

Lest prejudice might arise, I would avoid naming any particular breed of short-woolled sheep, as preferable; suffice it to say, that many different sorts are used in the manufacture of superfine and kerseymere cloths; and that, by due attention, and spirited improvement in the system of husbandry, they may be infinitely extended, and multiplied; whilst, by management, the quality may be most essentially improved. They, who consider this measure superficially, may be led to suppose, that attention to wool is, all at once, to produce neglect of the carcase. But why is it, that,

* The discussion of this subject being now well known among the trade, the advance on fine cloths, which would have taken place the week before last, is not yet heard of. Indeed, Mr. Wright, a manufacturer from Leeds, was so candid as to inform an honorary member of this Board, that intending to lay out a very large sum of money in Spanish wool just now, he was awake to the operation this discussion must have on foreign wool, and that he had thereby escaped a loss of some hundred pounds.

to avoid one extreme, we run into another? Why are those qualities in the same animal deemed incompatible? This doctrine is not of old standing, and for its age, its progress has been most fatal. To mark the close affinity of wool to the carcase, it is well known, that any wool-stapler, who is a judge of his business, will not only know, if sheep have been pinched by cold or hunger, but, by a break in the wool, will say within six weeks at what time of the year it happened. The fine-woolled manufacturers are strongly impressed with an idea, that the doctrines of the Leicester Tup Association have injured the wools of Great Britain beyond all belief. Surely they must regret, that doctrines, tending to serve perhaps a particular purpose, should have produced such general injury; they are too much masters of their trade to doubt for a moment, that the best and closest woolled sheep, of every description, is, generally speaking, the healthiest animal, and the highest of proof.

In the application of the different breeds of these useful animals to different countries soil and climate are absolutely decisive; and, where these circumstances are forgotten, disappointment follows. It is the height of folly to push any particular breed, where these are not congenial; and this argument is conclusive to all, who clamour againſt the introduction of one breed, lest it might injure another; for whilst we daily see so many commons stocked with loss, instead of profit, and the dry fallow system is yet to

be found in any part of the kingdom (the wettest clays excepted), every good breed in the island may look to extension, and the nation to increased wealth. And here it may not be amiss to observe, that to the mountebank doctrines of crossing dissimilar breeds, whom Nature, in its infinite wisdom, had set asunder, we are indebted for much confusion and mismanagement: but this, although prejudicial, is transient.

"*Naturam expellas furcâ tamen usque recurret.*"

Sheep are bountiful animals to man; for let us blunder as we will, they feed us, clothe us, and put money in our pockets; and can hardly, under any bad treatment, be kept with loss.

But convinced, that the shortest follies are best, and determined speedily to correct them, let us turn our attention to that management, which, in a very great degree, gives Spanish wool the preference it merits; and to the artificial, but profitable imitations of its rival, the Ryeland, or Hereford wool. Of the value of the Spanish carcase, and its aptitude to lay on fat, I would say little, for Spain is a country holding limited converse with strangers. All writers, foreign as well as native, agree, that the meat is good in quality; but of the Ryeland, I can from experience assert, that no sheep in this kingdom are worth, on an average,

more per pound, none will bear to stock more thickly on land, or look starvation better in the face, provided they are protected from cold.

The thought may be mortifying perhaps, but we are infants in the knowledge of sheep and their treatment, compared with the Spanish people. Their flocks, bearing fine wool, are distinguished by the appellation of *Trashumante*; and so called from travelling from one end of the kingdom to the other; wintered in Estramadura, and other warm provinces; during the summer months they graze on the mountains of Castille, Leon, and Asturias.

" On the contrary, those flocks, which are always stationary, are for that reason called *Estante*, and belong to the provinces of Estramadura, Molina, Cordova, and other districts. For the government of the above, the board, or council, of La Mesta is established, with its peculiar laws and jurisdictions: and is divided into four departments, *Segovia*, *Leon*, *Soria*, and *Cuença*. The wool from the two first-mentioned places is reputed to be of the first quality; Soria next, and Cuença the last; but amongst the whole, there are gradations of more or less fine and good quality, in proportion to pasture, and care of the farmer or shepherd.

" All foreigners agree, that no sheep produce such fine fleeces as the *Merino* breed. The pasture, and the temperature of the climate, contribute chiefly to uphold the quality of the wool in the Merino sheep; and likewise give such an excellent taste and flavour to the meat. Their head shepherd is a man of authority, and of unquestionable skill and activity; his wages are immense for that country: he has a horse, and has absolute dominion over fifty shepherds, and fifty dogs. Ten thousand sheep compose a flock, divided into ten tribes of one thousand sheep each; five shepherds to each tribe; so that each man looks after two hundred sheep *." In addition to a most admirable and systematic management of their flocks in general, the superior quality of the wool may depend on three circumstances, the last by far the most important. 1st. The use of salt.—It is spread on small tiles or slates, amongst which the sheep are driven, and allowed to take as much as they require: when grazing on limestone soils, they require none. It is supposed, and with great truth, to correct any acidity in the stomach, a disorder common to sheep even in that climate; but of a much more serious nature in the damp climate of Great Britain, more particularly when stocked on green floaty food, such as turnips, vetches, and young clover. The heavy duty on salt must be prohibitory in this country so far as regards sheep, and for that reason was not laid on in Spain. But it oc-

* See Dillon's Abridgment of Don John Bowles's Travels through Spain.

curs to me, that chalk may be a most beneficial substitute for it; and though not so warming in its nature as salt, is still as good to correct acidity. Chalk has long been given to fatting calves, for the purpose of correcting this acidity; and why not to sheep, and lambs, who are equally subject to it? 2dly. The practice of rubbing into the wool, red or yellow ochre in the month of September. It is supposed to mix with, and qualify the perspiration, which would otherwise give an asperity to the wool, and to form a coat impenetrable to rain or cold. And, 3dly. To the incalculable advantages they derive from the due operation of their code of sheep-laws, the Mesta; by changing their climate with the season, so as to preserve an equal temperature of air. Such treatment must benefit the carcases materially; the whole world allows it gives a decided superiority to the wool. Spanish flocks are never let out of the fold to feed, until the departure of the morning dews, which are deemed prejudicial to sheep, and may in part occasion that well-known disorder, the rot of the liver. There is little doubt that it is the immediate occasion of the foot-rot; which in this climate rarely makes its appearance before St. Bartholomew's day (the 25th of August). Their sheep are sweated a day or two before shearing, to make the wool part well from the body, as well as, perhaps, to add something to the weight; and are carefully housed during the night, or in cold raw weather, for some days after shearing. If, in one uniform temperature of climate, this treatment is essential to the health of sheep, and

beyond a doubt it is so; how much more is it necessary in the variable and uncertain climate of Great Britain? Yet numbers of us have never given a moment's thought, to what we may suppose would be self-evident to men of any capacity whatever: although we cannot command a temperate or steady climate, much of its severity may be counteracted by cheap and simple means. In the mountainous, or hilly, districts, essential benefit to the wool may be derived from attention to aspect and elevation, as well as soil; and where this attention has been paid, wool is of a superior quality. It is also familiar to every farmer whatever, that the value of the carcase is much influenced by an attention to this circumstance;—by stocking the higher grounds in summer, where fresh air may be found; and low, well-sheltered lands, lying to the south, when winter advances; but though known, this is for ever neglected in practice.

Sheep in some vales, particularly of the southern and western districts, where enclosures are small, and the circulation of fresh air impeded, will pay little or nothing, during the summer months, let the keep be ever so good, owing to the heat, and that instinctive terror, which they have of the maggot, or blow-fly. In the three winter months again, all men consider themselves fortunate, if their store-flock lose nothing in condition. Reasoning on our own knowledge, and on facts long established, need any stronger argument be adduced, to show how attentive we must hereafter be

to such a system, if we had not at this hour sheep in every part of the kingdom dying by thousands, of cold, and want of keep? It is cheaper to feed the out, than the inside; yet plain as all this seems to be, the practice is rarely, if any where, to be found, but in Herefordshire; therefore it is, that the Ryeland, as I shall prove by the samples I do myself the honour to lay before the Board, is, in quality, very nearly equal to the Spanish wool; and Spanish writers themselves confess it. The samples, too, of cloth, which I pledge myself were not made for the purpose, but found ready in the market for sale, have scarcely been deemed inferior in quality to those of Spanish mixture, even by manufacturers, or dealers in woollen goods; and some of the first reputation have examined them.

It must not be supposed, that I am suggesting costly buildings for the purpose of cotting sheep in the night-time during the cold weather; two objections arise to them; they are not moveable, and may want fresh air, unless high and large; for air is as necessary at these seasons to sheep as warmth, and warmth as air. Farmers, who come nearest to this mode of treatment, will shear the best wool, and will carry more stock per acre. What should any sensible man care for the shallow reputation of making an animal here and there fatter than common, or fatter, perhaps, than suited the market, where it was sold. Profit and good management are all we look to in husbandry. Nothing can be

more simple than that cot or covered fold I wish to recommend for general adoption during the cold months. Two frames, one fastened to the back of hurdles either round the fold, or, if only half round it, on that side where the wind is, and the other forming a penthouse, or cover, towards the inside of the fold, resting on a pole of four or five feet in height, with a declivity of fourteen or fifteen inches, to let the rain run off, will give sheep every protection they require, will keep dry their fodder, and will allow them to seek fresh air if necessary. These frames may be made of five poles, each eight feet long, and at fifteen inches distance from each other, may be bound by withy or rope-yarn, to reeds, long straw, or any light substance, which will turn wind and rain; by the help of a light drag on four low wheels, these and the hurdles may be moved from place to place, and set up again in as little time as, without such a carriage, is required to change a common fold; the convenience, and trifling expense of such cotting, must defeat every objection to a system, which ought, long ago, to have been in general adoption throughout the island. It is possible, that by a sudden change of wind, when blowing hard, these sheltered hurdles may be thrown down occasionally, and sometimes broken; but they may be replaced at a trifling expense: no other objection occurs to their general use worthy of notice.

Not a shadow of doubt rests with me, that in the short period of five years, under such management, whatever the breed of

sheep may be, the wool of the young stock will be improved one fifth in quality, and the carcase kept up at a reduced expense. It would be useless adducing any more arguments just now, to awaken farmers to a due sense of their own interests: few, perhaps, know the application of their own wool; into how many classes it is sorted, or that each, when sorted, finds its way over every part of the kingdom to its own appropriate manufacture, whatever the distance may be;—but to clothiers and wholesale dealers in woollens, a few words remain to be said.

On a desultory view of this subject, some may be inclined, and no doubt will say, *Cui bono?* what good will this do us? It will do this;—it will lead to the improved quality of British fine wool, which is the basis of their manufacture; that, if superfine cloths are made from picked samples, the command of 500,000 instead of 300,000 fleeces, must add considerably to the quality of the article manufactured; and they will daily feel themselves less dependent on an imported article, for which they are often forced to pay dearly; and which, from the political situation as before stated of the country from whence it comes, may be lost to our manufactures altogether. With a false prejudice on the minds of all Europe, that this foreign article was necessary for our fine cloths, I leave clothiers to judge how much, in such a case, their trade will suffer. As it is, I can assure them, I have found all ranks of men ready to purchase their goods, talking nothing of a reduced

price, but certainly very hostile to an advanced one. This sort of encouragement must strike home to their feelings, and is of more value than pages and volumes written on the subject.

During its investigation, I have had to contend with much mystery and secrecy; and without the assistance of some liberal and intelligent men of the trade, could never have possessed myself of these facts. To Mr. Lambert of Suffolk Street, I am particularly indebted; the event, I trust, will prove, that his time and skill have not been thr own away. I am possessed of many letters from gentlemen, with v hom I have had occasion to correspond on the subject, more particularly from some eminent clothiers near Leeds; from Mr. Ellman of Glynd, in Sussex, the distinguished improver of the South Down sheep; and from Mr. Powell, near Ross, whose flock, though small, is known to be of the pure Ryeland blood. To Sir Joseph Banks I am indebted for a pattern of his native coloured broad cloth, manufactured from sheep of the pure Spanish blood, bred in this country; and to Sir Watkin Williams Wynne, for a pattern of the like from a half-cross of the pure Spanish ram, and the North Wales ewe. The Bath and West of England Society has long paid unremitting attention to this subject, has in the handsomest terms expressed its approbation of this seasonable interference in a matter of such national importance, and is well disposed to render the Board that assist-

ance its situation in the centre of the fine cloth manufactures will enable it to do with every possible effect.

I must be indulged with a repetition of what is before stated, that, to avoid encountering prejudices natural to men's minds, I studiously have refrained from holding up any one breed of sheep in preference to another. Satisfied I am not at my own statement of these facts; but in this and every other instance I consider what comes from my pen, as fitting only to excite investigation from abler heads than it is my fortune to possess: from such we may expect discussions on this subject worthy the public notice.

However fortunate an investigation of this nature may have been, in engaging the public notice, in calling forth general support, in stimulating the manufacturer to exertion, and in opening the long closed eyes of farmers to so prominent a branch of husbandry, from the months of June to December, much might have been in agitation, but little in so short a period could well be proved. It becomes a duty, however, in the President of the Board of Agriculture, with no less gratitude than pleasure, to point out the consequences, which have absolutely resulted. Spanish wool, which, in the month of April, was above 5*s*. 3*d*. and daily advancing in price, has gradually fallen to 4*s*. 6*d*. per lb. and is yet falling: here is a positive profit to the manufacturer in his

raw article, of one fifth, which must call down shame on those, who persist in the late advance of 2*s*. per yard, on foreign cloths, facetiously termed, superfines.

In opposition to this, the visible improvement in the manufacture of British cloths, even in a few months, before any correspondent improvement in native wools could have taken effect, must tend to counteract any attempt at monopoly in foreign wools; the dread of which has hung like a millstone about the neck of clothiers, thrown the workman out of employ, and brought his distressed family on the overburdened parish for relief. Such has been the obvious result, so much in this short space of time has been realized to the manufacturer; and whilst Spanish wool, in spite of paragraphs in newspapers, and puffs without end, was gradually sinking to its true relative value, British fine wools have risen 6*d*. and 7*d*. per lb. which leaves a balance in favour of our own wools, of 1*s*. 7*d*. per lb.: they to this hour retain their price. This circumstance alone speaks the concurrence, without denial, of the public at large; and is of itself sufficient hereafter to secure every attention in farmers to the quality of wool. Observation too must be had to the period, which called for an adoption of such measures: the whole Levant market was just then opened to our manufacturers, which might have caused a rise on British, but never could have produced a fall in the price of Spanish wools.

The average prices of native wools are nearly as follows:

		s. d.	28 lb.	s. d.
Long Wools.	Lincoln - -	20 0	per tod, or	0 8½ per lb.
	Leicester - -	21 6	per do. or	0 8¾ per do.
Short Wools *.	Norfolk - -	48 6	per do. or	1 8¾ per do.
	South Down - - - -			1 10 per do.
	Hereford, trinded according to act of Parliament -	from 2s. 5d.	to	3 0 per do.
	Wools of the Worcester and Shropshire commons -	from 1s. 9d.	to	2 0 per do.

from North and South Wales, generally speaking, from Exmoor, Dartmoor, &c. too low to be here enumerated, bearing a rise, however, proportionate to other short native wools, and destined to the same manufactures: one instance, however, may be given; the extent of this last mentioned, Dartmoor, is well known, an

* It was vainly asserted by some, that kerseymeres could not be made from English wool alone. The author therefore sent for 250 lbs. of South Down wool, from the flock of Mr. Ellman, in order to prove what could be done with English wool, not by picking a small part, but by working the whole up into kerseymeres. Such a thing might have more easily been done from the Ryeland sheep, the wool of which, as is well known, bears a higher price. The whole of this wool, with the exception of a very few pounds, was worked up into kerseymeres of different colours, which proved of a most excellent quality.

object, from its magnitude, of national importance; its wool is, at this time, worth about 7*d*. per lb. whilst Herefordshire wool, by a partial attainment of the Spanish system, with few, if any other, advantages, sells for 2*s*. 6*d*. per lb. by the fleece, nearly four fifths more. What wool sheep of this sort carry, is "breechy," that is to say, long and coarse on the haunches, where warmth is not wanted, thin and wiry on the back and loins, where warmth is most essential to the health and profit of the animal itself. If such be the effect of cold and hunger in the southern, how much more caution is demanded in the northern latitudes of this kingdom? The necessity of warmth in many parts of the north is admitted, and after a manner obtained, at the expense of the wool indeed; tar and butter are rubbed in at a considerable prime cost, by which the wool is closed on each side the animal, forming a sort of penthouse. How tender the spinal marrow of every animal is, need not be brought just now to our recollection; this tarring and buttering is well meant, and, if it be not too expensive, if it does not injure the wool, and by the exposure of the back to rain and snow, endanger the health of the whole flock, it would be an excellent method. Hopes are entertained, that a substitute for such treatment can be offered to notice, productive of much good effect. Few commons, if any, pay better than that of Morf, which will appear, by reference to Mr. Pitt's letter of July 27th. Here he admits, that no return can be reckoned on beyond the wool, because all profit in the carcase

must go to support these sheep during winter. If then, on our most productive commons, sheep are kept for their wool, how can we account for such general and ruinous neglect of that produce, for which alone these animals are kept? A mere statement of these facts will warrant us, perhaps, in concluding, that we ought not only to enclose our sheep, but also our commons, such, that is to say, as will pay for enclosing.

The reader's pardon is solicited, if somewhat more be said on a subject hinted at in the address.—Every day's observation must add to our regret, that salt is not a component part of the food of stock, of sheep more particularly. How many diseases, arising from damp climate, from relaxation, and from rank green food, might it not subdue! Our duty on salt forbids even the smallest waste in its application, but by no means precludes its use. The ingenious, and no less benevolent, Count Rumford tells us, that in Germany, salt is universally given to oxen and cows in a fatting state, and that their proof is proportionate to the quantity given. We are all sensible of the effect of salt on the human body; we are told how unwholesome, we know how unpalatable, fresh meat and vegetables are without it. The ancients held it in the highest estimation, " Omnis mensa male ponitur absque sale." We also know the avidity, with which animals, in a wild state, seek the salt-pans of Africa and America, and the difficulties they will encounter to reach them; this cannot arise from accident or caprice, but

from a powerful instinct within, which, beyond control, impels them to seek, at all risks, that, which is salubrious, and laughs to scorn the speculative opinions of us weak mortals. But, if we must look to old usage, and dare not seek the untrodden path of nature and common sense, is it not notorious that hay, mouldy from rain, is rendered palatable, and infinitely nutritious to cattle, by simply strewing salt on the stack, at the rate of 10 or 15 lbs. per ton, when making? Equally notorious is it, that a sensible effect is hereby produced to the taste, that cattle will prefer it to better hay, well put together, and will demand, when fed on it, without injury to themselves, three times as much water; which circumstance alone accounts for that aptitude to fatten, which is never denied to hay so salted.

The President is little disposed to recommend that to the adoption of others, which he will not himself put in practice: he was staggered, as every other man will be, at the price of salt, which cannot, with the duty, be used at less than 1*l.* 5*s.* for each ton of hay, carriage not included; but from a perfect conviction, that, by its effects, a threefold interest will be returned, he is resolved in future to bestow from 5 to 20 lb. of salt on his hay for store, and fat cattle, varying the quantity, as seasons are more or less propitious; also, from 50 to 70 lb. per ton on sheep hay, which ought to be of the shortest and sweetest herbage: this will amount to about 1*l.* per ton; the expense is therefore trifling. As far as concerns its

application, salt cannot be conveyed into the animal in a more effectual manner than by sprinkling it on hay through a sieve, when in the act of putting together; for every particle is imbibed in the fermentation, without a possibility of waste. It will, no doubt, on trial, prove a better breakfast than those cold dews, which prevail in this country nine months out of the twelve. Dews are more prejudicial to the wool and carcase of those feeble animals than has been hitherto considered. The ill effects of green food so counteracted, the consequent increase of nourishment in such food, and the operation, in this variable climate, of a more equalized temperature of air, must hereafter become objects of the closest attention; the result cannot be doubted. Let it not be surmised, that any thing suggested on the carcase, and its management, be foreign to our subject,—improvement in British wool; this error has lived too long; it must be heard of no more. That, which affects the one, must affect the other; for both are fed from the same store, both are operated on by climate, both by food. Other modes, by which ductility and softness may be given to our wool, qualities in which only we are deficient, have not escaped notice. Trials of this sort are now making by some skilful farmers, the result of which shall be recorded.

We have still further to consider of a subject, which for many reasons demands, at this moment, a more explicit investigation. It has in part been given in the second volume of Communications to the Board, but it there appears a tail without a head, a detached correspondence, and something added by the author in conclusion, but the whole subject omitted.

Before, however, we proceed, it may not be amiss to consider, on what grounds an appeal to the landed interest of Great Britain was required: whether it was well or ill timed, whether necessary or superfluous.

All breeds of sheep in this kingdom may be arranged into two classes; those, which shear the short, or clothing, and those, which shear the long, or combing wool. The quality of the flesh in each class follows the character of the wool: the short-woolled sheep being close in the grain as to flesh, consequently heavy in the scale, and high flavoured as to the taste; the polled, long-woolled sheep more open and loose in

the grain, larger in size, " manufacturer's mutton," fit for such markets, as supply collieries and shipping, but by no means, generally speaking, of such ready sale.

Every practical man, looking over the map of England, who has given himself time to study the properties of its soil and climate, will admit, that one half the kingdom, at least, is by nature appropriated to the short woolled, fine grained breed. He might with safety admit much more than half. For it at length appears, that our climate, from the most northern parts to the most southern, can grow wool of the finest possible quality. Taking into consideration the upland pastures, the light convertible tillage, the loamy soils, and mountainous districts of the kingdom, such a proportion must be admitted to be moderate and just. But notwithstanding the great importance of the short woolled sheep to the nation, as well in a commercial point of view, both as to the carcase and fleece, as with respect to the great extent

of the kingdom appropriate to these breeds, the whole attention, both of farmers and breeders, has for these thirty years past been absorbed in carrying to a degree of perfection hardly credible, the heavy, long woolled sheep; such as Lincoln, Cotswould, Romney Marsh, and new Leicester, but more particularly the last.

To such extreme perfection has the frame of this animal been carried, that one is lost in admiration at the skill and good fortune of those, who worked out such an alteration. It should seem, as if they had chalked out, on a wall, a form, perfect in itself, and then had given it existence. Nay, fresh technical terms have arisen to express points in these sheep, thirty years ago unknown: such as the "fore-flank," and the "cushion," terms now universally admitted.

Such is the animal now—almost the reverse of what it was. And from whatever source it originated, whether from the care and nice observations of breeders, or from crosses with Ryeland or Dorset flocks,

is immaterial.—In eulogium of such, the author of this Treatise would have been gratified as to his own feelings; his doctrines too might have been received for a time with more popularity; but his duty to the public just then forbad it, and compelled him to take the part he did, hazarding doctrines unpopular with many superficial observers, with not a few, whose self-interested views it might derange, and with those, who had the means to reflect with advantage, but who had not profoundly reasoned on a subject of such extreme national importance. All, aimed at in this address, was, without partiality or indulgence, to impress on the recollections of farmers, that no breeds of sheep should be carried into diſtricts ill adapted, both as to soil and climate, to receive them: that, in exertion to improve the carcase, they should not forget there was such an article as wool: that, in opposition to modern doctrines, the improvement of the one was not incompatible with the improvement of the other; and that the breed of sheep, which, on any given quantity of land, carried for a continuance

the most wool as well as flesh, and both of the highest quality, was that breed to be preferred, of whatever description it might be, or from whatever country it might come. This was all the author ventured to suggest, and he would, under existing circumstances, have compromised the situation he then held, had he not done so. The delusion was too prevalent. It was a pleasant dream, and some did not like to be awakened.—Thus much in explanation as to what concerned the farmer. Let us now look to the manufacturer.

Many of the fine cloth manufacturers, fancying, but without a shadow of reason, that it would be detrimental to themselves, wholly forgetting that they formed a part of that community whose interests they were bound to support, have laboured with no common pains to poison the minds of people in general on this subject; such we mean as from their pursuits could not either be well versed in trade or in husbandry; and for a short time succeeded: but who,

by encouraging the wear of British cloths, would have given, in the outset, some little support to a national undertaking like this. Such manœuvres were unworthy British manufacturers, however for a short time they might succeed. It is not impossible, that, to do this the more effectually, some cloths have been sent to the London market, purposely ill manufactured. We would rather suppose they could not be so mischievously blind to their own interest; but such an idea must suggest itself, when we see the native cloths produced, worse in quality than those made long ago; such as hunter's cloths, and other sorts, known in the London markets. We have even been at a loss to conjecture from what cause our clothiers should set their faces against that improvement, by which every part of the nation must unquestionably derive such material benefit. There is not one well-grounded reason for the opposition shown to our endeavours. Were they all republican Frenchmen, they could have done no more. With pain we must reflect on it, but we refrain from indulging in that bitter

invective, which such narrow policy has of late provoked, and content ourselves with remarking, that these gentlemen have fattened on the indulgence of Government, and as is natural, indeed correct on such occasions, have been the first to fly in the face of its liberal and salutary measures *.

We speak not of all clothiers; for many have paid every attention to this most important subject, and have conducted themselves with becoming liberality. But for those gentlemen before hinted at, who, it should seem, are little in the habit of reasoning deeply, we have only to suggest, that if they throw impediments in the way of such improvements in our wool, as their cloths in their manufactured state will best demonstrate (for ten facts are worth ten thousand fine speeches), we shall be compelled to employ those, who have all their masters' knowledge of the

* The author must here take the liberty to notice a pamphlet on this subject just published by Lord Sheffield, in which the reader will find some masterly observations on the objections made to the exportation of wool to Ireland.

subject, and probably a great deal more, and want only the aid of capital to establish themselves in business with success.

Advantage in the first instance was taken of the want of more explicit information by what means any material improvement was speedily to be obtained, and also of the author's subsequent absence from England. The operation on the fleece, by that mode of treatment recommended, although certain, must necessarily produce only a progressive effect. Had he made known his intention of crossing the seas for the purpose of bringing home a flock of Spanish sheep, his attempt must inevitably have failed, and might have risked the lives of those concerned with him. This attempt is not easily accomplished at any time, but is more than commonly difficult juſt now in a time of war, as well as from other causes needless here to dwell upon. It was an object not only to obtain the sheep themselves, but the whole system of management adopted by those,

who had the care of these flocks of Spain. In both these particulars the author has been fortunate enough to succeed. The sheep are selected from a *trashumante*, or travelling, *merino* flock of undoubted high blood. The rams, twelve in number, were picked from a flock of 200; for, except the *manso*, or bell-wether, the males are left entire, on a presumption that they carry more wool than wethers, and equally fine. The couples (ewes and lambs) were selected from a number proportionably large. Of the high blood and quality of this flock, the admiration of those shepherds, through whose flocks, 22 in number, they passed in the course of their journey about the end of March, was sufficiently indicative, if not otherwise well established. Of their properties as to carcase, and, which is equally material, their power of living hard, so as to carry much wool and flesh on a small surface of land, it will be as well to draw a conclusion from fact rather than from assertion. That must not be deemed a bad breed of sheep, which, after a trial of some centuries, can maintain

its high quality of wool, making two immense annual journies, and in a less space of time than could well be supposed: more especially when we recollect that the first journey commences, when lambs are four months old, or even less. There are few breeds in this country, that could support such periodical marches for any length of time, and not suffer materially in the form, as well as quality, of the carcase; for both are inseparable, being, as before observed, fed from the same sources.

Before any opinion is offered as to the qualities of this celebrated stock, and if any opinion be offered it will be done with extreme caution, the author thinks it may not be amiss to say, that from the general character of this breed, as to deformity of carcase, he was prepared to find them worse than on examination they proved to be. Nor is this deformity applicable to us, or to be wondered at, when we recollect, that this nation breeds for the wool alone, careless of the carcase, which, if ever so handsome, from local circum-

stances, would bear little proportion to the value of the fleece: so with us, we have sacrificed all to the carcase, regardless of the fleece; whilst any man, who attentively goes to work, may realize both wool and carcase without the possibility of injuring either. They have two properties not common to the breeds of this kingdom; the first property is, that the males have horns and the ewes have none. Hence it should seem we have the means of carrying the Spanish fleece into the horned breeds of this island by means of the ram, without destroying the existing character of the breed, whatever it may be, an object of no little importance in the eyes of farmers. For it is observable in crosses of horned ewes with polled rams (natts), that the females are usually polled, and the males horned. It may not possibly be so in all breeds, but the author has seen it in crosses between the Leicester ram and Dorset ewe, he has also proved the fact to be so by a cross between the Bampton ram and Dorset ewe. Indeed, to establish this fact was the only object of such a cross. The same, therefore, may be practi-

cable by means of the ewe in polled breeds; such as the Ryeland, South Down, and Berkshire natts, sheep themselves probably of the same class, but varieties as to other short wool breeds, inasmuch as they have the fine fleeces and fine skins of our horned breeds; and, above all, they will stock as hard as to weight of fleece and mutton per acre, more especially the two first mentioned. The effect of a Spanish ram on the fleeces of a horned flock, such as the Dorset, the Welsh (a sheep of neat frame), on the Wiltshire, the Norfolks, the Dartmoor, the Scotch, and indeed the whole race of horned mountaineers, will be neither more nor less than a very great increase of profit on the fleece, with very little, if any, injury whatever to the form of the animal. And when we consider, that the fleece makes an annual return, the rental as it were, and that a quick return is allowed to be the farmer's best object, while the carcase, like the fee, can only be once sold, we may express alike our surprise and regret, that such fatal supineness should have thus long prevailed on a subject of such manifest

importance both to the tenant and landlord. The second property to be noted in this breed is a tendency to throatiness, that is, a loose pendulous skin under the neck, which is generally deemed a bad quality in England, and the very reverse in Spain. Both, perhaps, are in some degree right.—In every breed of this kingdom, which has come under the author's examination, and there are few to which he is a stranger, he has invariably found the throaty sheep not good in their skins, with every symptom of turning out ill in their proof (that is, evincing no aptitude to fatten), with exception of the Ryeland. This last, like the Spanish breed, carry wool of such high value as to counterbalance the ill impression of throatiness. Their skins are full as good, and in some instances more clear and rosy; a point of infinite importance in sheep, and a sure token of vigour and consequent disposition to fatten. Among the shepherds of Spain this property is very much esteemed; and they persist in commending it as an invariable symptom of health, always denoting a good skin, and a tendency to abun-

dant wool. These reasons are substantial enough to bring into repute any property whatever, and are strictly applicable to every sort of breed in every sort of country. Nor is it possible for any good judge to reject, on the score of carcase, a sheep, whose skin is of this complexion, when accompanied, as it is, with a constant aptitude to quick proof. It was necessary to speak clearly on this point, for such a property must at first offend the eye of our farmers, but, when unattended by those bad symptoms above mentioned, will probably cease to be an object of offence. In one particular only, as to the treatment of sheep in that country, the author was left in doubt: this on his return he made it his business to do away. It was this: Don John Bowles, in his letter to Mr. Peter Collison (see Annual Register 1764), says, that in the month of September red ochre is rubbed into the back and loins of sheep, for the purpose of qualifying that perspiration, which would otherwise give an asperity to the wool, as well as of protecting the animal from rain and cold; a practice there considered as

beneficial to the wool. It was not clear, whether any earthy substance was actually applied by the shepherds of Spain, or, if applied, what its quality was. On the author's return to England, samples of wool being brought to London, Dr. Garnett had the goodness to analyze it; whose account is as follows:

"Since Friday morning last, Dr. Garnett has been engaged in experiments with the wool, and finds, that the substance, with which it is impregnated, is a saponaceous kind of clay, very similar to fuller's earth. It does not appear to have been mixed with oil or any kind of grease previously to being rubbed on, so that it must either have been reduced to powder and rubbed on, or tempered with water to a certain thickness. There is a small quantity of fine silicious sand in the earth, which may either have been in it at first, or may have adhered to the fleece, and can be of no consequence. The wool is cleared most completely from the earthy matter, merely by washing in cold water, and does not seem to possess the usual greasiness of common wool.

"Forty-six grains of wool, on being washed in cold distilled water, gave out nine grains of this earthy matter, which by different tests seemed to be clay, but it was so very viscid, or glutinous, that it took more than twelve hours to pass through a

very porous filter; this is, however, the case with most of the clayey substances. Dr. G. thinks, that nothing resembles it so much as fuller's earth. It does not seem to contain any iron, when tried with the most delicate tests, and therefore is not of an ochry nature."

In other respects these sheep are not much unlike some English breeds. The rams, indeed, have a buff tinge in their countenance; they may reach 17 lbs. a quarter, when tolerably fat. The ewes are not low on their legs, are very fine in bone, and may reach 11 lbs. a quarter. We have it recorded, that this breed of sheep originally came from England in the beginning of the fourteenth century: it is high time they return to it again.

In a work just published, "The new Farmer's Calendar," the writer delivers his sentiments on the subject of wool, as follows:

"To render ourselves independent of foreign supply, we must increase the aggregate quantity of our own wools; but particularly of the fine. It is then an object of national concern to obtain, as

soon as may be, a considerable quantity of the best Spanish stock; and very late intelligence gives great encouragement to this speculation. Citizen Lasteyrie, in a letter to the *Societé Philomatique*, in France, has fully confirmed, from facts, the opinion of our Dr. Anderson. Spanish sheep, bearing the finest wool, live and thrive in the most marshy grounds, and rigorous climates; in Holland and in Sweden the wool has remained unchanged to the fourth generation. Some of the Spanish sheep, bearing the finest fleece, are of great size." *P.* 576.

Infinitely more could be adduced in support of these propositions; but besides that the author is not inclined to estimate highly speculative assertions, he prefers other men's opinions to his own, more especially when grounded on fact; and is somewhat gratified at an opportunity of extracting some benefit to England from the practice of our neighbours, the French; aware that many, who refused attention to what he laboured to inculcate as their friend, may listen to it, when coming from an enemy.

Fas est et ab hoste doceri.

The following passage from a Portuguese newspaper merits our most serious attention. It is thus literally translated.

Genoa, 19th December.

By some excellent works, published in France, we have proofs of the importance of the improvement of French wool, demonstrating at the same time, that this precious branch of rural economy, well cultivated, forms a great part of the national riches of *some neighbouring people*. The French government has profited by the peace with Spain, to obtain from this last nation a great number of heads of the wool-bearing cattle, denominated *trashumante*, with the design to accelerate the multiplication of this precious race through the whole republic. There are certain prejudices, however, which reign among the French husbandmen, and which may contribute to retard the good effect of this measure. The Society of Agriculture of Paris possesses, among other information, relative to this object, two letters from Citizen Lasteyrie, an associate, who is now travelling through the north of Europe, for the purpose of extending his knowledge and of instructing his fellow-citizens in useful matters, which are practised in other countries, but not known in his own. In the first letter he says, that in Holland, near Leyden and Haerlem, notwithstanding the moist climate, the fine wool-bearing cattle of Spain prosper. He saw the fourth generation of those animals born in

that country with wool as fine as the flocks, called *Merinos*, in Spain, notwithstanding the soil and climate being apparently contrary to the constitutions of those animals.—In the second letter he says, that he was witness of the same good effects in the most northern parts of Denmark and Sweden, where the same cast has existed for many years back. He expressly mentions, that the government of Denmark, having procured from Spain three hundred sheep, of the *Merinos*, two years ago, there had been only one dead since their arrival, notwithstanding the cold winter of the last year, and the extraordinary rains in this *.

Here is a repetition of the fact alluded to by the author of the New Farmer's Calendar, but commented on by men of another nation, not at all interested in

* It might have suggested itself to some people, that the subject alluded to in the Address would excite the attention of France, and induce that country to take some active steps to the prejudice of our fine wool manufactures, by stopping hereafter the import from Spain, or by such adoption of the breed itself, and its mode of treatment, as might be most prejudicial to this kingdom. Here then is evidence, that this idea not only had suggested itself before, but was even acted upon with spirit. The author is now well persuaded, that no reflecting man can object to what he has endeavoured to establish on this subject: and he defies any such to the proof. If any objections should arise from disappointed views of self-interest, and should present themselves to his notice, it will be found no difficult task to draw aside the veil, and hold such motives up to view in their native deformity.

the success of such attempts. So that it appears, whilst the Swedes, Danes, Germans, and French, are encouraging this breed to the utmost, we, the most interested of all, have entirely neglected it; one ILLUSTRIOUS instance only excepted. This passage may be worth the perusal of those, who have read the Introduction to the last volume of the Bath Society Papers. The author of it speaks the sentiments of those short-sighted manufacturers, hinted at in the former part of this subject; wholly forgetting, that any future impediments on its import may arise, or that the import might altogether cease. We now learn that an additional duty of 27 *per cent.* has been laid on Spanish wool, imported into this country through Portugal. However beneficial this duty may be to those, who are advocates * for the growth in Great Britain, as well as the import into it, of the finest wools, we regret, that such a clog has been put on

* See "Reply to a Treatise, called An Answer to the President's Address to the Board of Agriculture on the Subject of Sheep and Wool."

manufactures. We also well know it must produce concurrence, instead of opposition, to the now obvious benefits, that will result to the nation from an improvement of our native wools. Recent statements, and others now preparing for the public, as well as ocular demonstration, will warrant us in concluding without presumption, that we can grow wool in the southern and western parts of the kingdom, equal in quality to that of Spain.

Lord Sheffield, in his valuable pamphlet before alluded to, on the export of wool to Ireland, says,

Rich pasture will increase the weight of the fleece of our short woolled sheep: it may lengthen the thread, but it will not give the harsh and hairy quality of our coarse-woolled sheep.

But, if an increased demand should raise the price, in this country, we know it would encourage and increase the growth; and a small additional price on the wool could not essentially raise the value of the manufacture, as from one pound and one fourth to two pounds of wool is sufficient to make a yard of cloth. A

steady good price for wool would ultimately be highly advantageous to the manufacture, as well as to the country. The quality of our wool has been greatly debased, by the limitation of the price to that, which those, who have the monopoly, may choose to give; the bad principle in question exists in no other instance: and in consequence of laws and prejudices which, first took place, when we had no good principles of manufacture or commerce *, wool does not bring its intrinsic value; of course there was not proper attention paid to that article; and the coarse, or long, wool has been found more profitable, although, from the limitation of the price, and the great abundance of the article, it has been so low as I have described. The average weight of the short wool fleece is little more than 2 lb. the weight of long wool is known to have amounted to 30 lb. but 10 lb. is rather an high average; the quantity, however, much more than makes amends for the

* We must not admit the assertion of the declaimers against the export of wool, that the principle of prohibition existed in our laws from the earliest time; and they mention the good times of Elizabeth, during which long reign no law passed on the subject. They can hardly be so ill-informed as not to know that a duty on the export of wool furnished the principal branch of revenue in this country; that the exportation was first checked in 1337, which lasted a short time; it was permitted to go to certain ports abroad, and a chief object seemed to be to prevent the exportation without paying the king's duty. We find large quantities were exported till 1439, when the exports were restrained to the ports of Calais, Catalonia, and Italy. It continued to be exported in great quantities to the Low Countries till 1630, when its exportation was forbidden; but it was never strictly prohibited till after the Restoration, and still more strictly by the Act of 1696.

quality, independent of the weight of the carcase. It is avowed by the growers of long wool, that, on account of the impossibility of getting a price, that will pay them for a fine quality, their whole object is to increase the weight, that being the only principle, by which they can gain. The increased price of wool within a few years, although it has not been steady, has encouraged the wool-growers; and lately efforts have been made towards the amelioration of the clothing-wool, and that increased price has produced an examination and a competition, which has been beneficial; but, while the injudicious limitation of price through the monopoly exists, there can be no dependence on due encouragement, nor foundation for that speculation, which is the parent of improvement.

The first Person in these kingdoms has condescended to attend to this subject, and, through his zeal for the public good, the finest woolled sheep of the world have been introduced among us; and it seems to be proved, that as fine wool as we usually procured from Spain, fine enough to answer all our purposes, may be raised in this country. It has been sold here at as high a price as the best Spanish wool; and no complaints were made by the purchasers respecting the quality, although the price of Spanish wool at our market is from 3*s*. 6*d*. to 4*s*. 6*d*. per lb. and it sold last year even at 5*s*. 6*d*. per lb. A large sum might be ultimately saved, which is

now paid to foreigners for wool, and the manufacture supplied at a lower price.

The wool of these sheep sold at different prices, but continually increased in value as the excellence of it became more known. Lord Sheffield, in his Appendix, pages 4 and 5, goes on to say,

The value of the wool being now in some degree known, the clip of 1798 was washed in the Spanish manner; and it sold as follows:

The number of fleeces of ewes and wedders was 89;

Which produced in wool washed on the sheeps' backs						259lb.		
Loss in scouring	—	—	—	—	—	92		
Amount of scoured wool	—	—	—	—		203		
Which produced,								
Raffinos	—	167lb.	—	at 5*s.* per lb.	}	£.	*s.*	*d.*
Finos	—	23	—	at 3*s.* 6*d.*	}	47	8	0
Terceros	—	13	—	at 2*s.* 6*d.*	}			

The clip of 1799 was managed in the same manner, and produced as follows:

The number of fleeces of ewes and wedders was 101;

Which produced in wool washed on the sheeps' backs								346	lb.
Loss in scouring	—	—	—	—	—			92	
Amount of scoured wool	—	—	—	—				254	

Which produced,

						£.	s.	d.
Raffinos	—	207 lb.	—	at 5s. 6d. per lb.	}	63	14	6
Finos	—	28	—	at 3s. 6d.				
Terceros	—	19	—	at 2s.				

The ram's wool of the two years, sorted together, produced as follows:

Quantity of wool washed on the sheeps' backs								314	lb.
Loss in scouring	—	—	—	—	—			99	
Amount of scoured wool	—	—	—	—				215	

Which produced,

						£.	s.	d.
Raffinos	—	181 lb.	—	at 4s. 6d. per lb.	}	45	15	6
Finos	—	22	—	at 3s. 6d.				
Terceros	—	12	—	at 2s.				

In addition to which, if any further statement of facts were necessary, some samples of Spanish wool from sheep, whose parent stock left Spain eighteen

years ago, are just received from the Cape of Good Hope by the Camel man of war. They were sent by a gentleman from the Cape, whose professional knowledge and public employments entitle him to much credit on such subjects.

Speaking of Mr. Van Reener, he says, " he has 1000 sheep, of which 400 are of the genuine Spanish breed, brought here in the year 1782 from Holland, where they were sent by the King of Spain from Estramadura. Six hundred are of the Cape breed, with heavy tails.

" A Cape wedder, three years old, weighs sixty pounds, viz. meat, tallow, and tail; the last article making six or eight pounds of the weight. It has sometimes weighed thirteen pounds. The wedder is worth two rixdollars. Their wool is rather hair than wool. The fleece is never used, and the skin is worth but a trifle.

A Spanish wedder weighs from sixty to eighty pounds. The wool has rather improved than degenerated in this climate. A specimen of wool indiscriminately plucked from the live sheep is sent. Mr. V. R. has made cloth of it for clothing his own slaves."

This gentleman's immediate departure from Cape Town to the Cafre country on a public mission did not at this time allow him to be more explicit.

This subject demands the closest attention of the landed interest of Scotland. There is no part of Great Britain more capable of adding immensely to its wealth, by an increase of that "wool-bearing cattle." Numberless avocations, and health impaired by an accident, have of late prevented the author from personally visiting that part of the island, in the welfare of which he is so much interested. Having through his whole life applied himself to husbandry in general, and more particularly to that important part of it, the study of cattle and sheep stock, it was

his intention to have examined that part of the kingdom, its climate, its soil, and markets, with all the attention he was master of; then to have addressed himself to some of its most distinguished proprietors, requesting their adoption of such breeds, as would appear best suited to the general character of the country. The competition in such a case would probably lie between five or six breeds of short-woolled sheep;—begging leave again to remind the reader, that in any part of Great Britain, which has soil strong enough for, and markets adapted to heavy long-woolled sheep, there he is persuaded they will be found beneficial, and there he wishes them to abound, whether in the north or in the south.

It was unfortunately and falsely conjectured, that attempts were made to prejudice the minds of people against the long-woolled breed; on the contrary, by a caution against their adoption in soils and climates ultimately unpropitious to these breeds, essential service was done to them. By attempting to prove too

much, we are apt to prove nothing. Any man then, who loves the animal, must with regret hear the advocates for certain distinguished long-woolled breeds assert, that they will do well on Snowdon and prove on Plinlimmon; and yet such language has not unfrequently been held.

To conclude this subject:—When we consider the different latitudes, which, from authentic documents, we find congenial to the finest woolled sheep, the extremes of heat and cold from sixty-two degrees north to thirty-five south latitude, as Sweden, Denmark, Germany, for that also manufactures cloths of the very finest quality from Spanish sheep long established there; as Holland, Spain, and the colonies inland from the Cape of Good Hope; few men will hereafter venture to assert, that we, who are placed between both, cannot maintain, in all its purity, that, which originally belonged to Great Britain.

POOR BILL, &c.

UPON this subject, the author feels it necessary to speak with the utmost caution. So many men of great abilities have bestowed both their time and labour in endeavouring to alter and ameliorate, and, in some instances, totally to change the system of poor laws, that he scarcely hopes his ideas will be found altogether practicable. His object, however, is to promote discussion, confident, that the more such a subject comes before the public, the more likely is some plan to be formed, by which to benefit the poor themselves, and ease those, who now contribute to their support. Two facts are certain. The condition of the poor wants amelioration, and the burden upon the landed interest in particular is heavy in the extreme.

This subject has not been taken up suddenly. The author has had it for some time in consideration, and

has consulted various persons upon it, as will be seen in the course of these observations. He took, also, every precaution to select those, who in their relative situations, he thought, were the most competent judges of the subject; and possessed candour enough freely to speak their sentiments, whatever they might be: nor would he, even now, have ventured to bring it before the public, had it not been for two circumstances.

Fearing, and indeed expecting, some strong legal objections, he was induced to lay it before a very high law authority, whose approbation, as to its principle, it gained; and from a singular concurrence of events it happened, that the very day after he had received such approbation of his plan, another Bill upon nearly a similar basis was sent to him, in his official capacity, from Mr. Bishton of Shropshire; a man personally unknown to the author, but of whom he has heard a very high character. Both this Bill and Mr. B.'s observations upon the author's, will be given.

He now lays before the public the outlines of his plan in the same state, in which they were originally shown, and subjoins such opinions as he has received from those, whom he has consulted; thinking it in that state more open to discussion. And he trusts, if it be hereafter found practicable, it will in the course of investigation, by these means, work itself into that form, which, under all circumstances, will be most beneficial to the public.

OUTLINES.

IT may be proposed to vest in proper hands, a fund in relief of the poor rates, for the supporting the aged and sick, &c.; to be levied either parochially, by hundreds, counties, or by one general accumulation of the whole kingdom; under the direction of commissioners of the highest respectability; as follows:

From those earning between 7*s*. and 10*s*. per week, whether labourers in husbandry, manufacturers, servants, or mechanics,

3*d.* per week may be taken, covered by the like sum from the employer. The annual saving of this class will be 1*l.* 6*s.*; every other class in proportion; whereby the different degrees of accumulation will equal the former habit of life of each person; the only criterion, by which can be estimated the value of any man's labour. The effect of this measure, if established by the Legislature, will be visible in an increasing habit of economy amongst that class of people most interested in such a measure, the poor: in the gradual reduction, and perhaps hereafter annihilation, of the poor rates; which, generally speaking, bear partially on the landed interest; and, as manufactures increase, will continue to bear on it more heavily: to say nothing of the severity, and sometimes cruelty, with which the poor, applying for relief, are too often treated.

The success of friendly societies is universally admitted; in some respects, an excellent institution, but not generally adopted; and those subscriptions among servants, for the maintenance of each other, are good, inasmuch, as, when sick, or unemployed, they are supported; but masters of families suffer, because an independence of interest is established, which the plan I venture to suggest is not liable to: indeed it binds more closely, and by the surest ties, that mutual accommodation, which is the bond of civil society.

The law cannot sanction bastardy, therefore the proportion paid by each should be as existing circumstances will admit, but heavy enough to operate as a prohibition from the father of the child as well as the mother. Marriage should, *on no account*, be forced, as hitherto practised: for numberless evils arise from it; misery through their whole lives to both parties; ill usage to the woman, sometimes even murder. It also operates as a temptation to vice with some women, who, despairing of settling, fix on some young man, and take this desperate chance of obtaining their end.

No great difficulty will be found in the collection of this fund, either weekly or monthly, from the employer or master. It may be put under the direction of magistrates in the county, or of commissioners in towns, annually chosen if necessary; and being vested at interest will accumulate to an immense degree, productive, perhaps, beyond any other measure yet proposed, of industry, good faith, and morality.

It might also be ordained, when a removal is made from one parish to another, that a transfer be made also of the accumulated property belonging to the person removed, if the fund be not general. Indeed this clause will hardly in effect be necessary: for, alleviate, or do away, the poor rates, and the necessity of removal (except, perhaps, in corporate towns) is done away also. One argument for an alteration in the poor laws is, that [illegible]

there is a pride (whether praiseworthy or not, is here of no consequence), which frequently prevents an application to the parish; and they, who do apply for such relief, have an odium thrown upon them by their neighbours, and become a sort of degraded cast in society. If this operates in a painful degree on those, who continue in their native parish, or usual places of abode, to which by early habits or connexions they are attached, how much more cruel is it to turn adrift among strangers, a man in the decline of life, when he most needs society and comfort?

It is needless to observe, that an accumulation for a given number of years would, on the outset of such a plan, be necessary.

The author now thinks it necessary to insert such comments and observations, as he has received, and, in the first place, those, which seem most hostile to his plan. He waves, at present, entering into a discussion of the validity of such objections, leaving it open to others, or to himself at any future time, should he be so disposed. The first extract is from a magis-

trate, who has been much engaged in the administration of the poor laws, with great credit to himself, and advantage to the commuity.

THE basis of this plan is undeniably good; namely, to relieve the burden of the rate, by promoting, and extending the operation of weekly contributions, to secure relief in sickness and old age; but the principle, on which societies to this end have originated, grown, and prospered, is that, on which alone they can be promoted and extended: a sense of independence of parochial interference, together with the pride of governing themselves by their own rules, and administering their own funds, constitute the spirit, which first inspired and still actuates their being. If you change or abate this spirit, the thing itself is no more the same.

If all men in the kingdom could be prevailed on to bring their 3*d*. per week to a common fund of this kind, we know, that all men would proportionally be provided for in age and sickness; extreme distress would no more be seen, universal comfort would be the unavoidable consequence.

If such would be the effect of general contribution, it is perfectly natural for the economist and philanthropist to say, " Let

us enforce this measure by law, let us compel mankind to be provident and comfortable." But, at this point (as it appears to me) the nature of the effort changes; that, which is now real and practised, becomes visionary, and, if not impracticable, at least most difficult of execution.

When the voluntary contribution becomes a tax, it will appropriate to itself those obstructions, which all taxes carry with them; the majority will, if possible, evade them, and by so much as the perception of this tax will be general (I may say universal), by so much will the proportion of persons, disposed to evade, be greater.

Suppose, as is the case in my own neighbourhood, that in every parish there is established, at least, one society of this kind; as every man may, so every sober and provident man will, join in it, and those, who do not, are the portion of the community, who would evade, or perhaps resist, compulsory contribution.

You are aware of this, and therefore you propose to depend on the employer for the collection; you call on him to account for, and to pay two threepences for, or from and out of each week's wages from 7*s*. to 10*s*. and so in proportion. The persons concerned are no longer a society of contributors, but the objects of a new system of taxation. You will allow me to lead you

to an examination of this system, as to its nature, its operation, and the means of its collection.

1. As to its nature.—It cannot be denied, that it is equitable, and, if we were a new community, requiring a plan for providing for the indigent, I see no other scheme so reasonable and so just; indeed if carried upwards, in full proportion to every other species of income besides wages, it might be a fair substitute for the present means of levying a poor's rate; it would then principally fall on that property now appropriated to its use.

2. Relative to its operation.—So far as the design is shown by the Outline; it is nominally a contribution from the class of persons themselves most liable to require assistance, in aid of, and, finally, to exonerate the presumed contributors under the present system.

You are too much a man of business to contend for the practicability of fixing a maximum of wages; I may assume, therefore, as admitted, that the price of labour, like that of every other commodity, will be regulated by the balance between demand, and the quantity ready to supply that demand; with this limitation nevertheless, that the lowest point, or minimum of wages must, in a degree, be governed by the cost of the first necessary of life; for no man can work for less than will support

existence; in other words, the value of corn will be the medium in regulating the exchange between the labour and the money.

I assume, further, that nothing can be reckoned as part of the price in this market, which does not come into the vender's pocket. In short, without going into speculative deduction, observation may, of itself, lead to the conclusion, that the contribution will not fall on the labourer; the man, who is now paid 7*s*. will not be content to take 6*s*. 9*d*. for his work.

It is then a tax to be paid exclusively by persons employing labourers and servants in husbandry, trade, and other occupations. If, as you propose, sixpence be taken from 7*s*. to 10*s*. per week, it will be a tax in addition to the pay of wages of about 6 *per cent*. In this view it seems advisable to consider the measure.

1st. Will it not be prudent to take into account the opposition such a tax may meet with from the trading interest?

2d. Weighing the probable resistance of this interest, will it be too powerful for the landed proprietors to contend with?

3d. Will it be prudent, under such circumstances, to attempt it?

3. Regarding the mode of collection.—Until the measure is more developed into detail, it is not possible to judge decidedly. By the outline given it seems, the employer is to be accountable for the sum nominally paid by his workmen, as well as for that charged on himself: that is (if so), you are to depend on the employer to keep the account against himself. The parish officer must have a power to call on every employer for an account of servants and workmen employed by him, from time to time. If he does keep, and, keeping, does produce a true account, he exposes his own trade and transactions: if he does not keep such an account, or does not produce a true one, where is the check?

These difficulties I suggest as appearing on the face of the proposal, without presuming to say, they may not be obviated in the detail of a Bill. But when we consider the numbers, whose labour is divided into fractional parts of weeks and days; when all the employers of a trading city (say London) are to account for all the labour of that city; I shall not say it cannot be done (for as it is practicable in the nature of things, it may be done by universal concurrence), but I do not see ground for confident expectation.

Having thus exposed to your consideration the leading objections which may operate against your proposal "for Relief of the Poor's Rate," it is but fair to own I reason on the subject with a

weaker impression of the necessity of any measure to that particular end than most other gentlemen, whom you may consult. I am not so dissatisfied as others with the existing means of maintaining the indigent part of the community, and, insomuch as they are existing, and have been acquiesced in for 250 years, I give them a preference to any new and untried system *.

I am aware, the Poor Law of this kingdom is a popular theme of reprobation; terrible are the forebodings from the increased, and increasing, amount of the rates under that law. Venturing, however, to judge for myself, I acknowledge to you that I think the laws in being are in themselves as free from objection as any that it is probable will be substituted; I shall contend they are better than new laws can be, until they have gone through a like series of practical improvements.

* What is here advanced in denial of the intolerable pressure of the charge called the poor's rate, must be understood as applied purely to so much of it as is employed to the relief of the indigent. To reason upon it to your point, it must be divested of the heterogeneous mass of charge, which is heedlessly heaped upon it, with which it has no connexion, and on which your plan cannot operate. Calculate and deduct from it the immense expense of building prisons, repairing them, and supporting their establishment; building and repairing bridges, maintaining and conveying felons, convicts, vagrants, &c. under the term of county rate; expense of raising militia, provisional cavalry; paying serjeants' and corporals' wives and families, and wives of ballotted men, which is in fact paying the army: in short, every expense, from which the Minister can relieve the Treasury, is thoughtlessly admitted by Parliament to the county rate, and thence to the poor rate.

The evils, which we complain of, may be rather attributed to the idleness, and indifference of the middle and superior classes, to their administration, than to any defect of the laws of themselves.—Much is doubtless required of these classes; but if it be found impossible to attach them to the execution of the laws in being; it is assuming more than I shall admit, to say they will labour to give effect to any new ones, which may be made.

Since the Legislature has passed the Act to prevent vexatious removals, and that to repeal so much of 9th Geo. as enabled officers to disobey an order for relief of paupers in their own houses, I venture to say, the administration of the poor law is not, in any point, judicial or discretionary in the overseers, nor does it depend on any less respectable part of the community than the magistracy of the kingdom.

If the most liberal and enlightened of those, who are named in this commission, will not act under it; I am at a loss to discover a remedy. Their neglect is a dereliction of the peculiar privilege of our free government. There is no substitute, but in such an interference of the executive as would never be tolerated.

If the persons, appointed to be overseers, are low, sordid, and corrupt, it is not from defect of the law that they are so; for the

law most decidedly requires the magistrates to choose them from amongst the most discreet and substantial inhabitants.

As to the severity and cruelty of these officers in their administration (regarding which, by the by, I am disposed to make great abatement for popular prejudice), the poor object has an instant remedy: on application to the nearest magistrate, he may and, as far as I have seen, does obtain an irresistible, order which takes him out of the officer's will *.

Far indeed am I from thinking, that the poor do not suffer many evils, which might be prevented; much is to be imputed to their own incorrigible and increasing irregularities. The rest must go to the account of the dormant and obsolete state, in which the laws in their favour are suffered to remain †.

Regarding the consequences to be apprehended from the increase in amount of the poor rates; nationally considered, I own there remains much to be proved, before I shall argue on that side the question.

* By the above observations, I must be understood as defending only the general law of the land. In some of the local laws there are powers derogatory to every principle of economy, humanity, and policy.

† In support of this opinion, I refer to the instances where (as in the case of Lord Winchilsea's family) it has been the custom to give to the laws their favourable execution.

When it is observed, that the rate, which was no more than 2,000,000*l.* is now become 2,500,000*l.* I also observe, that the remaining portion of land rent (namely, that to which the proprietor is entitled) is raised and increased in a still greater ratio.

Suppose, that, fifty years past, a tenant paid to the landlord 20*s.* per acre for a piece of land, and to the poor rate he paid, in addition, 3*s.* 4*d.* per acre: if the payment of this rate is 4*s.* 2*d.* the rent payable to the landlord is not only become 25*s.* but probably 30*s.* perhaps 40*s.* in some cases 50*s.*

If, within the last fifty years, 500,000*l.* has been added to the amount of the claim of the poor on the land; it may be asked, if the value of money has not diminished in a still greater proportion during that period? Has this increase of nominal amount caused any diminution in the land rent of the kingdom? If not, the increase of the one is not at the expense of the other. It is said, that in some places the poor rate has been doubled; on inquiry, might it not appear, that in such places the owners' income from the estate had tripled? I claim to be understood as arguing the question generally; particular instances are not to decide on such an estimate.

You will allow, that on this point I am at least a disinterested reasoner, when I tell you, that two thirds of my fortune consists

in land, paying from 10s. to 14s. per acre to the poor rate. Should the Legislature think it proper to relieve my land from this charge, I am at a loss to say, who would be equitably entitled to the benefit of the relief; I certainly feel, that, as owner of the residuum, I have no claim to it; I and my predecessors purchased or received by testamentary devise the estates subject to a charge, which, if at the time of alienation, was not so high in nominal, was at least equal in proportionate amount; we no more paid for, and therefore are no more entitled to, this portion of rent, than to the tithe or chief rents issuing from the same.

As I fear we must be content to consider indigence as inseparable from every human society, the maintenance of those, whose lot it is to suffer it, if not provided for by some special endowment, must fall a charge on individuals of the community, either equally over the whole or partially on a division, as the policy of the country shall ordain. When there already exists an income specially appointed and applied to that end through a long series of alienations and devises, which income neither impedes nor diminishes the produce, or enterprise of the kingdom, when that income is paid from a purse, to which no class of proprietors can equitably say they are entitled; such may, surely, be considered in nature of an endowment.

Would it be wise in Parliament to surrender such a revenue, or divert it from its present use, with a view of raising a like sum by a direct taxation on individuals?

And if men in sickness, decline, or failure of employment, are to receive liberal support, instead of bare existence, as at present, the total amount must be greatly more than now raised for the purpose.

Having submitted to your consideration my doubts in opposition to received opinion, I most perfectly coincide with you, that this rate may increase beyond the extent of my argument; it will do so, if it increases faster than the value of money diminishes, or in a greater ratio than the landlord's rent improves; it will then become a tax partial on the landed interest; and such increase should be checked. Of all means as yet imagined to that end, none so good, none so certain, none attended with so many moral and frugal consequences as the giving encouragement to friendly societies supported by voluntary contribution.

I believe it practicable to give an extension to the existing spirit of such societies far beyond what it receives from any existing law, and that without trenching on the freedom of will, which is the essence of their being.

The greatest incontestable evil of the Poor Law is the encouragement it affords to dissipation and improvidence. In a general plan of compulsory contribution, would false excuses for a claim on the fund, on a plea of sickness, or failure of employ, be less frequent, than at present, or more easily discovered? Certainly the encouragement to such attempts would be greater, as the sum to be obtained would be full maintenance instead of bare existence.

Friendly societies, as now conducted, are, by their nature, guarded against deceit of this kind; they encourage frugality, and originate anew that spirit of independency in the labouring classes, the loss of which is the greatest cause of the increasing pressure on the poor rate.

I most decidedly agree with you, that "marriages should on no account be forced." If, as you observe, there is any part of the kingdom, where such practice is usual, I venture to say it is not supported by any sanction of law, and, where attended with any circumstances of conspiracy, it can be, it ought to be, and frequently is, punished. If, under terror of a power of commitment, a magistrate should so far forget himself, as to second the narrow view of a parish officer, it is an act of barbarity, to which he is neither compelled nor directed by the law. Indeed, if we suppose this plot against the freedom of choice in the most tender

of all connexions to be seconded by such a magistrate, I with difficulty see how the clergyman concerned can escape ecclesiastical censure. This is an evil, however, which may be treated separate from any other, and, after your humane reflection upon it, I may hope for your support, in recommending (as I have long intended) to the Legislature a special law, which would do away the power, by which it is effected.

This is in some measure connected with what follows from another magistrate, whose valuable works on the police laws mark him as the person of all others the most competent to judge of the effect of such a plan in an immense population, like that of the metropolis.

IT would afford me the greatest pleasure to be in any degree useful to you in the pratriotic object, which you have in view, and upon which you have done me the honour to consult me.

No subject, that ever engaged my attention, appears to be so difficult as that, which concerns the poor: and the Outline, offered

to my consideration at this time, is not without its share. Mr. Akland brought forward a similar idea in his work on the poor laws, except that it was not proposed by him, that the employers of the labouring people should be subjected to any burden.

Supposing this system to be carried into effect, and that it would annihilate the poor rates, its operation would be extremely partial. The burden would either fall on the poor themselves, or that useful class of the community, who support the state by employing the labouring people, to the exemption of all other classes of idle and opulent individuals, who are compelled to pay their proportion at present.

But waving these objections, the remedy proposed would operate very partially, inasmuch as it would only attach to that class of labouring poor, who have been able to contribute to the fund; to the total exclusion of numerous classes of aged, imbecil, and infant poor, &c. for whom this scheme will not provide.

It occurs to me also, that there would be great difficulty in preventing frauds, as well as considerable expense in collecting the money. At the same time it were much to be wished, that a plan of a general friendly society could be formed and carried into execution, that would pervade the whole kingdom, under a more enlightened, and a less dangerous and mischievous, management

than at present exists. You will, perhaps, be surprised, when I state to you, that the friendly societies, in and near the metropolis, hold thirty-four thousand single meetings, in ale-houses, in the course of a year. Admitting, that much good results from these institutions (as I am ready to do), I have had too much reason to fear, that not a little evil is also to be dreaded. To attain the former and to exclude the latter is the great desideratum; and to that point your plan would certainly in a great degree go.

I lament, that my numerous avocations, joined to the attention I am at present bestowing upon another branch of political economy no less important, disqualifies me from being so useful as I could wish in the design you have in view, which requires a depth of thinking, and a knowledge arising from minute investigation, which no living author appears to possess in so great a degree as Jeremy Bentham, Esq. who has published outlines of a work on the subject of the poor, in Mr. Arthur Young's Annals of Agriculture. His object seems to be to go to the root of the evil; and his talents and abilities, manifested by the powers he has displayed as an acute reasoner, and a judicious and persevering investigator, seem to fit him for this important undertaking.

My own fixed opinion is, that nothing but a total change of the present system, by placing the whole concerns of the poor under the permanent management of the most able and enlightened

men in the kingdom, instead of being (as at present) in the hands of the least enlightened and the least able, with the disadvantage too of their being changed every year: if this could once be effected, every subordinate arrangement calculated to benefit individuals and to reduce the poor rates, by making the chief part, who are able to work (but supported idly) produce from their labour enough to maintain themselves.

We come now to the remarks of Mr. Bishton; but his own plan shall be first given, which the author, as before mentioned, received "ex officio" the day after he had made his own in some degree public.

Plan for the Relief of the Poor's Rates, by Mr. Bishton, of Kilsall, Salop.

IT is a general opinion, that the rapid increase, and the high rates now paid for the relief of the poor, have been chiefly occasioned by the luxurious way, in which servants are fed and clothed; not only those, who are employed in towns, but also those, brought up in rural employments. Thirty years ago, the

hireling to drive the farmer's waggon, had no more than from 5*l.* to 6*l.* per year wages; now we find such servants receiving from 9*l.* to 10*l.* and upwards. And I am very apprehensive, that those, who are well acquainted with the trading part of the community, will be able to draw from thence a very similar account, which evinces the propriety of considering of some method of drawing from, or rather saving the money, which these people wantonly squander away, in the time of their being in possession of more than plenty, to the introducing them into habits of luxury and vice, and the debauchery of their morals, which they can never after retrieve.

There is a hint in the pamphlet entitled, "A Plan to enforce the Act of the 23d George III. for the better Relief and Employment of the Poor, and the Encouragement of Clubs," which leads me to consider the methods taken by such of those above described by clubbing, &c. who look forward for relief in an honourable way. Their language is, "Let us lay up for a rainy day; we have now more wages than we can, or at least more than we ought, to spend; we will not now spend all we get, to the ruin of ourselves in future, and meanly look up to our respective parishes to assist us upon the most trifling illness, &c.: No; let us join and subscribe our mites, which at present will be no inconvenience to us, and will hereafter be our comfort."

Here the thinking part of the most illiterate of the community have pointed out to the Legislature a way, in which they can relieve themselves, and have proved the expedience most satisfactorily by numerous instances; and if so, there can be no reason to hesitate in forming a plan to oblige those, who are able, but not willing, or too thoughtless, to stake so much of their superfluous gains for the above purpose, as it may reasonably be thought they ought to spare. Therefore I would propose, that all hired men-servants, who have more than 4*l.* a year, and not exceeding 5*l.* shall be obliged to pay weekly into the hands of the overseers of the poor of the parish where they reside, the sum of 1*d.* and those from 5*l.* to 6*l.* the sum of 1½*d.*; those from 6*l.* to 7*l.* the sum of 2*d.*; those from 7*l.* to 8*l.* the sum of 2½*d.*; those from 8*l.* to 9*l.* the sum of 3*d.*; and those from 9*l.* to 10*l.* and upwards, the sum of 4*d.* All labourers, who have not two children born in wedlock, and chargeable to them, to pay ½*d.* per week for every ſhilling they earn, not exceeding 6*s.* The masters to be accountable to the parish officers, and to be empowered to stop such stipends out of the respective wages. The same sort of plan may be adopted for persons in trade; but those, who are more conversant with the gains of such people, are more able than myself to arrange the payments.

I would propose, that the present poor rates should subsist for two years, and, after that time, the contributors under the new

regulations should be empowered to demand, by aid of justice if necessary, in case of illness, for a man, the sum of 9*s*. weekly; for his wife 4*s*. and for each child 2*s*. The overseers to account yearly before the justices in the same manner they now do; and, in case of any dispute, the justices to settle it.

At the decease of any of the contributors, the widow to be paid 1*l*. 10*s*.; and, at the decease of the wife, the husband to be paid the sum of 1*l*. towards their funerals, &c. All persons superannuated to be paid 1*s*. per day, and the proper reliefs to widows and children to be under the direction of the justices, who should have the fund, thus raised, laid before them yearly.

It may be thought expedient, that single women, and other persons of all ranks and degrees, should subscribe a weekly sum to the common purse for the relief of the poor, which would make the poor rates more equal; for under their present arrangement the monied people, and many of great opulence, do not contribute, in any degree, either to land-tax or poor rates; but if, by misfortunes, &c. such persons happen to be reduced, as the law now stands, the landed interest is liable to relieve them. Besides, the monied people have an exceeding advantage fallen into their scale by the war, for their incomes have been increased one fifth; and the landed proprietors have decreased almost in the same proportion; and that may be given as a weighty reason, why the

landed interest should be disburdened of the poor rates, by making it as near as possible an equal tax on all degrees of people, and particularly, that those should in their prosperity be obliged to contribute to the general fund, in preference to their being permitted to lavish their superfluous money away, looking up to a parish for a maintenance, when they should happen to want. Introducing the above in such small degree may prevent it being unpopular; but in due time I conceive there may be many beneficial alterations; for, by proper arrangements, the present poor laws may be rendered wholly unnecessary, which would be a great saving, by paying all superfluous money arising in the respective parishes into the county purse; by that means all litigations in townships and parishes would cease, as the relief of the poor, under some such arrangement, would occasion the whole county to be equally interested; but for the present introduction, the former part of my proposal may be best, until the operation of it is known.

The following queries will arise:

What is to be done, when a subscriber goes into another parish?

He must pay in the parish where he resides, as all parishes will share the same chance; but where the person resided the last month, there he must resort for his pay.

What is to be done, when the money subscribed is not sufficient to answer the outgoings?

The respective parishes are to make up the deficiency; and if there is a surplus, it may be placed out at interest, under the direction of a justice of the peace.

These are his remarks, which the author received some time afterwards.

I THINK your stipend of 3*d.* per week from the earnings of between 7*s.* to 10*s.* per week, would be better divided into classes.

The hired servants by the year, who are consequently at their masters' tables, may pay to their respective masters,

Those of not less than 5*l.* and under 6*l.* per year,				1*d.*	per week.
6	to	8	—	1½	do.
8	to	10	—	2	do.
And all above		10	—	3	do.

Labourers, artificers, mechanics, &c. not having two children born in wedlock, whose earnings, without board, were

7*s.* and under 8*s.* per week,				1*d.*
8	to	9	—	1½
9	to	10	—	2
10	to	11	—	2½
And all above		11	—	3

All lodgers, whose earnings or incomes were as above, to pay the same respective sums into the hands of their landlords.

All house-dwellers not coming under the descriptions as above, whose rents

Are under 10*l.* per year,	to pay	3*d.* per week.
10 and under 20*l.*		4
20 and under 30		5
And persons of higher rents to pay	—	6

The sums, small as they are, will amount to a very great income, and, I apprehend, will far exceed the amount of the present poor's rates over this kingdom; but then the money will be brought out of the pockets of a very great number of people, who now pay nothing for the support of the poor, though of as great, and many of greater abilities by far, than those, who now support

them, at the same time are themselves equally liable to become poor, and consequently may want parish assistance.

This plan is chiefly designed for the lower orders to support themselves in adversity, in a much better manner than they are now supported, particularly in illness and old age: for I would propose, that, in such cases, they should have double, what they now have, under proper inspection and regulation by the justices. The opulent may, though not probably, become poor: but the before stated subscription from them at present, would prevent, in some degree, the reflections of the inferiors, and it would be told them fairly, that, if the opulent came to want, their allowance is not to be more than those of the lowest degree, but confined to the same rules, as all the lower orders would be dealt with.

I am aware there may be an objection made to this plan, which, in my humble opinion, ought not to have the least weight, but to facilitate it, which is, that the gentlemen of the law would lose the sessions business. However improper, I am afraid that consideration had a very heavy cast against the proposals of the late Mr. Gilbert for reducing the poor's rates; but I hope that selfish idea will not in this day be suffered to have any weight.

I should, by the before arrangement, consider the division of parishes to be out of the question: that all places in the kingdom

should be alike to all poor in want, for where their residence happened to be, there they should receive the stipulated relief, which should be 9*s*. per week to the sick, and 1*s*. per day to the infirm and impotent: to be under the inspection of the church-wardens and overseers, and the regulation and decision of the justices. But it should not be lawful for any person to remove from one parish to another, when their allowance had commenced, before they were recovered, and the same regulation to take place as to the aged and impotent. The pay of those sent to hospitals to cease. All persons coming into a parish, and the time of their going out, to be registered by the respective house-dwellers, and delivered to the parish officers, with the amount of their stipends once a month, under a very heavy forfeiture and exposition of their names. In course, the present poor's rates in each parish must be assessed as far as to make up any deficiency in the intended arrangement.

As to the act which passed to regulate and encourage clubs, I think it was improper; for although the clubists plainly show us the method, by which the societies can provide for themselves when in want, their application to higher authority, by which they should be regulated, would, in my opinion, be very preferable, as it would be more unlike equality, &c.

The two following extracts came from an inland county, where, the author believes, no manufactures are carried on, at least to any extent. The first is from a very well informed and active magistrate and clergyman.

THE increase of the poor's rates appears to me to have arisen from four causes: of these, three are permanent, and, as I apprehend, cannot be counteracted; namely, an increased population, new modes and habits of life, which, while the higher ranks adopt, they cannot wonder their inferiors imitate, and the increased prices of every article of necessary consumption.

The increase of poor's rates arising from bounties paid to men drawn for the militia, from allowances to their families yearly, augmenting with the number of their children, from the expenses attending the provisional cavalry, and the acts for raising men for the navy and army, has been very considerable: but as the cause is temporary, will cease with the war, and therefore may be omitted.

But a fourth cause, which has contributed to the increase of the poor's rates, and in my opinion equally with the other three put together, has been the ignorance, inactivity, and in many cases still worse defects of the parochial overseers. The middle ranks of

society have gradually worn away. Men of moderate landed property can no longer reside on their estates. The larger land-owners either do not reside, or, if resident, seldom take an active part in parochial concerns. The yeomanry and tenantry are left without guidance and direction in the management of them; and they are managed accordingly. They are frequently intrusted to the least enlightened and the least able. But, while I agree with the worthy magistrate in this remark, I cannot join with him in recommending a total change of the present system. As the case stands now, the most able in every parish take a very small share, or totally emancipate themselves from the burden; and so little are the laws attended to, that I have frequently known the most considerable men, both for property and abilities, continued year after year churchwardens, that they might be exempted from being overseers. Every parish, if the inquiry was made, will be found to have some properly qualified: and I heartily wish general endeavours could be made throughout the kingdom to call the attention of the more respectable inhabitants of each parish to the true spirit and meaning of the poor laws: I wish, that churchwardens and overseers formed, as those laws direct, a constant committee, which by the continuance of some in office might be rendered in some degree permanent: and, above all, I wish, that in the choice of parochial officers attention were paid to the character, ability, and disposition. Till the existing laws are duly executed, which I do not hold they are at present, it is fruitless to attempt new regulations. I think the

parochial division, as the most ancient and most familiar to the people, on the whole liable to the fewest objections, and I would wish, that the efforts to be made for the reform of abuses and the lightening of burdens were restricted to the observance of existing divisions, and the execution of existing laws. I dread innovation, and am averse to new organizations, the leading features of a late poor bill, which, happily for the community, was laid aside. And my opinion on this subject has been strengthened by observing, that in the Reports of the Society for bettering the Condition of the Poor (which I have hitherto seen), their plans have been either for regulating the efforts of private charity, or compatible with and practicable under the present poor laws.

These general remarks have in a great measure anticipated my opinion of your plan. If it would be productive of the good effects, you expect from it, it is to be wished, that somewhat similar had been established in quieter times, and while the minds of the lower class remained untainted and uncorrupted. But now, that so much industry is used to persuade them, they have not their due share of property, to subject the pittance they have to a direct tax, would, as I apprehend, be to sow the seeds of universal discontent, if not to provoke open resistance. There are too many malignant spirits, who would be busy and active in fomenting and increasing the discontent, and in calling forth and assisting the resistance. I therefore deprecate the attempt.

But, if these fears should be deemed vain and imaginary, and more competent judges should think such a plan established by legislative authority would be quietly and readily submitted to, it remains to be considered how far it would answer the ends proposed by it.

The ends proposed are, reformation in the lower classes, and a diminution of pecuniary burdens to the higher.

I have here to regret, that the Outlines going little further than to define the payments to be made by labourers and workmen, and their employers, and being silent as to the application of the sums so raised, any further than that we incidentally learn some part, if not the whole to be placed out at interest, I know not how far the following observations will be deemed applicable:

As to the first end proposed, a reformation of manners, I confess myself unable to discern how the compulsory payment of a weekly cess is to increase the economy of the poor, or how it is to be so productive of industry, good faith, and morality.

As to the second end proposed, the alleviation of parochial burdens, granting the execution of the plan would operate as you expect, no probable estimate can be made of the relief it would

afford, without a statistical knowledge of several parishes in different parts of the kingdom; I am competent to speak only of one (and that a small one), in which I resided many years; and you may depend on the accuracy of my information. The weekly cess proposed on master and servant would there raise about two thirds of the average amount of their poor rates for some years last past; but as one half would be paid by the employer, the alleviation would be only one third, on a supposition that the money raised is to be immediately applicable to the same purposes as what is raised by rate; but as it should seem it is not to be so applicable, but is to be placed out at interest, the effect would be to increase the present burden one third, while the benefit to be received is distant and remote. I conceive the present is not a favourable season, in which to make such an increase.

The foundation of your plan is to draw one half of the sum to be raised out of the pockets of those, who now do not contribute any thing; but I doubt, whether such would be its effect. Where labour is plentiful, the farmer would contrive to throw the whole on the labourer by a proportionate diminution of wages; and, where hands are few, the labourer would indemnify himself by insisting on an increase of pay from his master. In mechanical trades, such as bricklayers, carpenters, house-painters, &c. it would fall neither on master or journeyman, but on the employer, to

whom it would be charged. And in manufactures, for home consumption at least, it would cause more than a proportionate increase of price to the consumer.

You think no difficulty can occur in the collection; if you had been a witness to the infinite trouble, that now occurs in large parishes in collecting rates precisely ascertained, and payable only twice in the year, you would foresee still greater in gathering the perpetually varying sums accruing from such a tax, whether the collection were weekly or monthly. In the parish, wherein I now reside, there are upwards of 90 occupiers, all of whom occasionally, and the greater part of them constantly, employ labourers: it would be full employment for one person to collect the cess, and his salary would be an additional charge on the parish.

The keeping accurate accounts of the sums raised would be another considerable difficulty. You propose, that, when a pauper is removed, the total of what he has paid, (is this also to include what has been paid by his employer?) with its accumulated interest, is to be transferred to the parish, to which he is removed. Therefore every parish must have a ledger, containing a separate account of every man's payments, of the times in which such sums were placed out at interest, and of the interest received upon them. To the keeping such accounts the generality of parish

officers are totally unequal, and I believe many parishes have not a single inhabitant capable of it.

I am at a loss to conceive what checks could be devised against fraud and collusion between master and servant, which would certainly be frequently attempted.

There are many cases very common, that would require particular regulations which it would be difficult to frame. What is to be done, where the employer resides in one parish and the labourer in another? What, where the labourer is employed by different masters, and in different places in the same week? What, where the labour is performed by strangers and aliens, whose abode, and even names, are unknown? as for instance, haymaking in the vicinity of London, and harvests in the Fens.

These are the objections and obstacles to the execution of your plan, which have occurred to me.

Mr. Bishton's plan is similar to it, and, in my opinion, liable to similar objections: his proposal of abolishing the distinction of parishes would, I apprehend, be attended with pernicious consequences. However defective the present execution of the poor laws, there still exists an idea in the minds of parish officers, that

they are interested in the economical dispenditure of the public money: let more attention be paid to the choice of men properly qualified, let pains be taken to vest the management of the poor in the hands of churchwardens and overseers jointly, as the law has placed it, and this sense of interest would be a powerful stimulus to their activity. Under the present system they see and know, how expenses arise; they can check, what are improper, and they are induced cheerfully to submit to what they see to be necessary and inevitable; but, if you enlarge the sphere, and divide the kingdom into departments, you destroy this sense of interest, and you bring the minds of those, to whom, after all, must be entrusted the chief part of the management, to a state of indifference and unconcern: they will cease to make efforts, the good effects of which must depend on similar efforts in others, with whom they have little connexion, and to whose conduct they are in a great measure strangers.

But, if the execution of either plan should be attempted, I beg leave to suggest, that a given rate on wages would be the simplest mode (perhaps an halfpenny in the shilling would come near the sums proposed), and that the proposed allowance to husband, wife, or child, in case of sickness, should be regulated by the price of labour in every place, as are now the allowances to the families of militia-men. One common standard can never suit the different parts of the kingdom; and the variation of the price

of labour in different parts, seems the best measure of the variation to be made in the allowances.

Mr. Bishton proposes to transfer part of the burden from the landed to the commercial and monied interests. It seems to have been the original intent of the Legislature, that the latter should bear their proportionate part: the statute of 43d Elizabeth directs the money to be raised by taxation of every inhabitant; but the practice of two centuries, and the decisions in the King's Bench, have been unfavourable to the taxation of personal property. It would require a new statute to enforce it, and I apprehend there would be some difficulty in wording such a statute, and still greater in executing it.

If the objections made to your plan, and the difficulties likely to occur in the execution of it, should be such as to deter you from the prosecution of it, I respectfully submit to your consideration, whether the end proposed might not, in part, be obtained by making the contribution of the labourer, not compulsory, but optional, and by this means to supersede the necessity of benefit societies, which are certainly productive of evil as well as good.

Let it be enacted, that every person, on paying weekly a fixed sum to the overseers of the poor of the parish, in which he resides, be entitled, in case of sickness, to an allowance to be re-

gulated by the Act, and which should be superior to the usual rate of parochial relief. Such allowance to be paid, not only in the case of incidental sickness, but also to those incapacitated by age. The sums, received by the overseers, to be applied in relief of the rates as received, and the allowances to be charged on the same as paid.

Under this plan the odium of compulsion would be avoided; the expense and trouble of collection would be saved; the subscription being voluntary, the subscribers would be interested to make regular payments; there would be no occasion for long and intricate accounts; no funding of money, nor calculation of interest. Whatever effect such an Act had would be in immediate relief of the rates. This plan would not supersede the present system, but would be engrafted upon it, and I acknowledge myself as desirous of practicable improvement, as averse to total alteration.

As you have turned your attention to the poor laws, I take the liberty of pointing out to you the necessity of repealing so much of the 8th and 9th William, c. 30. as relates to badging the poor. It is, I believe, now no where practised, and is repugnant to the spirit of the times. But as the law stands, any sturdy overseer might withhold relief, and throw a parish into a flame; or any malignant inhabitant, assisted by a pettifogging attorney, might

recover the penalty against every parish officer, who, in the common routine of office, pays the weekly relief. Laws, that neither are, nor can be, executed without endangering the public peace, should not be suffered to remain in the Statute Book; they can no longer produce good, and may be converted into instruments of evil.

This comes from a gentleman in the same neighbourhood as the last extract.

I THINK every person must approve the idea, suggested by you, of encouraging the labourers and other persons in the lower classes of life, to raise a fund for their support in age or sickness; but to make this a compulsory measure would be so extremely unpopular, that I am of opinion it would be inexpedient to attempt it; and in some measure irreconcilable to justice. In the first place, if 3*d*. a week were to be taken from labourers of every description, earning from 7*s*. to 10*s*. per week, the impost would be extremely unequal; difference of age, state of health, number of children, and a variety of other circumstances, would create a very striking difference in the ability to pay, of those, who receive equal wages, and would render, that a very heavy and

severe contribution in one case, which might be spared without difficulty in another. But supposing this to be got over, the distribution of the fund would, I fear, be as unequal as the mode of raising it. Supposing the old and the infirm to be excluded, yet still, where a fund was raised by the contributions of members taken with so little discrimination, and under circumstances so dissimilar as they must be on the present supposition, their probable claims upon it afterwards would be so different, that the younger, healthier, and less encumbered part of the society, would conceive it to be a device to throw the maintenance of the other part, chiefly or partly upon them; and that it was in reality a tax upon their labour, a poor's rate in a different form. Indeed I should fear, that, as a compulsory measure, both the labourers and their employers (the two classes of men, who are principally concerned) would violently oppose it, and, combining it with other circumstances, might be led to believe, that it was intended as a tax upon their income, and more especially if the future management and application of the money raised were not in a great measure left to themselves.

If I thought myself qualified to suggest any thing upon the subject, it would be, to make the contribution on the part of the servant, or labourer, optional, but to promote and encourage it as much as possible by a suitable (and in cases, which required it an equal) contribution on the part of the public: to leave the choice of the mem-

bers to themselves: to guard against the embezzlement or misapplication of the fund raised, by requiring security from those intrusted with it, and also an annual or periodical account of the disbursements, but, in other respects, to leave the immediate disposal of the money, and its future distribution, as far as possible, to themselves. A plan of this sort would no doubt be greatly beneficial to the sober and industrious poor, and if it could be regulated so as to be, in appearance as well as in reality, rather a bonus to assist them, than a scheme to tax them, it would in time materially contribute to prevent many of them becoming chargeable to their respective parishes, and thus prevent or lessen the increase of the poor's rates. The beneficial effect would undoubtedly be indirect and remote, but I fear this is all, that can be done at present; I am not sanguine enough to expect, that any practicable scheme can be devised, which will either annihilate, or very greatly reduce the poor's rates, at least for many years to come. What proportion the sum contributed by the community should bear to that of the subscribers, or how it should be raised, would be a proper subject of inquiry, if the general idea were approved; but I think it would be impolitic to impose it directly upon the masters or employers of the servants or labourers, because it might induce them secretly to oppose the measure, and to dissuade their servants from agreeing to it.

What has been suggested respecting the expediency of placing the poor under the permanent management of persons of a higher

description than the present overseers, is very material. The same idea was entertained by Mr. Gilbert, who had paid very great attention to the subject. Mr. Gilbert's plan extended to a very great and almost radical alteration of the whole system of poor laws, and would be too expensive in the first instance, and too hazardous to be tried at present: the magistrates might perhaps be empowered to appoint the most respectable men the country affords (with very few exceptions), and to oblige them to continue in office for three or four years, and then to make a partial and not an entire new appointment. I have no doubt that Mr. Colquhoun's idea is strictly just, as to the description and character of the overseers of the poor in London and its vicinity; but I do not think those in the country are in general of so low a description as he supposes, nor so careless of their duty. The increase of the number of chargeable poor is undoubtedly very rapid, and affords matter of very serious consideration; but I fear it arises in a good measure from causes, which no legal regulations can remove, though they may alleviate them. The price of labour is greatly advanced, but not, I think, in proportion to the price of the necessaries of life, taken together; so that the mere labourer cannot now support his family so well as formerly, and of course must more frequently become chargeable. The manufactures in this kingdom are extended almost beyond calculation, but the use of machinery has increased in a still higher proportion, so that women and children (at least such as live at a distance from ma-

nufacturing counties) cannot now so easily procure work, nor are they so well paid for it. The system of farming, also, is said to be greatly altered, so that the mere labourer is now seldom able to procure milk for his family, the cheapest and most wholesome of all things. I suppose the increase of the prices of meat, cheese, candles, &c. to be necessary and unavoidable—that the use of machinery has been the great means of extending and supporting our manufactures and our commerce. The causes may, therefore, have been both necessary and beneficial upon the whole, and yet productive (in part at least) of the consequence, I have mentioned. The same causes, which render it more difficult for the labourer to support his family, make him ultimately careless of them; and the absolute desertion of their families is now a very common practice amongst the lower classes; that of frequenting alehouses still more prevalent and pernicious. This is undoubtedly the great and leading cause of the corruption of the lower ranks, but it is very difficult to devise a remedy. Beer is absolutely necessary for the labourer. He cannot brew it, and the farmer cannot be allowed to sell it to him—alehouses, therefore, are necessary. But their number should, if possible, be reduced, their practices strictly watched, and their misbehaviour punished. I do not think the present system of poor laws very deficient; but it is very difficult to enforce a proper observance of them. If the overseers of the poor were of a somewhat higher description, and were to continue in office for a longer time—if the labourer, who idly wastes

his time, or extravagantly squanders his money, were apprehended and brought to justice and punished, as he may be by the existing laws, much misery and much mischief might be prevented; and the extension of the idea, on which friendly societies are founded, might materially contribute to the future and comfortable maintenance of the poor; but this should, I think, be done with caution, lest it should be misunderstood by the ignorant, and misrepresented by the disaffected.

A leading gentleman at the sessions of a very central county did the author the favour of making the following observations on his plan. He is situated in a manufacturing county, between Coventry and Birmingham.

THE principle of compelling poor persons, while they are able, to provide for the support of themselves and families in sickness, or inability, appears to be just, as it is only a modification of the general law, by which persons are bound to use their utmost endeavours for the support of themselves and families, before they can

claim relief from others. It is also evidently beneficial to the contributors, provided they can be assured of receiving back the whole of their contribution, or the chance of contingent advantages equivalent thereto.

It may be doubted, however, whether the principle of exacting a contribution from the employer is equally just, as it is not for his own benefit, but for the relief of others, to which he can only be bound to contribute, as a tax imposed by the state, which cannot be just, unless it bears equally on all in proportion to their ability; and it is obvious, that the number of hands employed is no criterion of ability. It will also operate as a tax on the produce of labour, and in some cases, where the value of the labour makes a considerable part of the price of the article, a very high one; four or five per cent. and in some cases more.

It may be said, the master receives a benefit from the labour of his servant, but for that he pays a full price, when he contracts with him for it—if not, it is unjust to tax the servant, who receives less than his due. If the master is charged to the poor's rate (which must continue for various purposes) besides, he pays more than his share. If not, he may pay more or less, but is not charged by the same rule as his neighbours, which in justice he ought to be.

It is supposed, the collection may be effected without difficulty; but, when it is considered, that it must depend on the information of the master or the servants, both of whom are interested, it should seem liable to much evasion, and will be attended with a great deal of trouble, especially in towns, if collected weekly, and if monthly, with great loss, from removals, &c.

It does not appear how the interest of the persons, contributing in the sums paid by them, is to be secured to them, especially where their employment is transitory, as on canals, enclosures, and works of the like nature, and harvest work; and also several manufactories. A provision seems to be intended in case of compulsory removals; but not for persons, who follow their work from place to place, as in the instances above mentioned, and indeed it is hardly practicable, if it is meant to give the contingent advantages arising from survivorship, as relief in sickness, old age, and to orphan families.

Many labourers, the fittest subjects for this plan, are employed from place to place in public works. To give them back the money they have subscribed, after a few months residence in any parish, would be doing more harm than good, and yet how else can they receive the advantage of their contribution?

Notwithstanding the above objections, and others, which might perhaps occur (many of which however might be obviated), it is a plan well worthy serious consideration; and I have no doubt might be so modified as to produce great public advantage.

Two very worthy and intelligent clergymen, who live in one of the western counties, in the midst of the clothing neighbourhood, took the trouble of giving their opinions, for which the author feels himself much obliged.

MY opinion is, that a fund of this nature would be productive of great benefit to all classes of society. Wonderful would be the effects, that the landed interest would derive from it. Would Government but aid and assist such a fund with its security, the increase would be rapid. Whatever objections some friendly societies might have hitherto made to its interference, the security, which is the grand point, would be established: it ought to be considered, and would meet its due reward. The sum would be very large, if suffered to increase for ten or twelve years with in-

terest and compound interest; and it would be decidedly for the interest of the landed property, to promote such a subscription to the utmost of their power, inviting the labouring classes of every description to become subscribers (not excluding women at half price), from 18 or under, to 30 years. It would most assuredly insure them future comfort, and the sacrifice of a few pounds by a gradual advancement at that time of life would be imperceptible, and amply repay for so provident a conduct. There are but two descriptions of people within my view, whom it would be at all likely to press hard upon, from being employers: the farmer under 40*l.* *per annum*, and the little tradesman. Certainly it would be for the ultimate advantage of the land-owner to support the former; the latter, no doubt, would soon find his remedy.

It is really my firm belief, that most, if not all, other employers, would soon find their recompence by encouraging so laudable a plan to the utmost extent, and would, by that means, form such a link in society, that it would be almost impossible for them ever to depart from. I cannot conclude without expressing my sincere and earnest wish for its success and speedy accomplishment.

P.S. Recollecting, just as this was going to the Post-office, that Mr. Ackland, of Broadclist, a few years since offered a plan to the public for the relief of the poor, I sent to a friend for a

perusal of it. In several instances I think it meets your ideas, but not in the grand one. He is certainly entitled to great merit, for the care, attention, and zeal, he has bestowed upon it. Dr. Price, the famous calculator, praises the performance, and has supplied him with one of his tables.

ON the perusal of your Outlines, I was content, for the moment, to wish success to your exertions; but having, for a long time, hoped some one of the many plans for the relief of the poor and of the poor rates, would be so perfected as to be put in practice; and foreseeing a multitude of good effects likely to arise from one established on the principle of the Outlines, I could not refrain from trying how far it would answer on a small scale. If the labourers and male servants of this parish, earning from 7*s.* to 10*s.* per week, subscribe 3*d.* per week, and this subscription be covered by a like sum by their respective employers, and the mechanics of the same ability subscribe 3*d.* per week also; it would require twenty-five years to accumulate a capital by compound interest of 5*l. per cent.* so that the interest may be equal to the average poor rates, properly so called, that is, exclusive of county rates and other incidental charges. As the land-owner would be so materially benefited by a reduction of the poor rates, I thought, if he

contributed something extraordinary, he would have no occasion to complain. I therefore supposed him in the case of a tenant at rack rent, to contribute equally with the tenant, that is, to cover each subscription of the labourer, &c. with the like sum of 3*d*. And in the case of an estate in hand, to contribute a double sum, or 6*d*. per week for each immediate labourer and servant. I then found the poor rate might be annihilated in twenty years; but this without an intermediate appropriation of any part to the use of the poor. Calculations on a small scale, I am aware, are not found, in general, to afford a fair ground for forming a judgment of the operation of the whole; but here we have the same, or almost the same, data in both cases, namely, an incumbrance to a certain amount incurred by a certain number of individuals, and the number of these individuals, in the present instance, fix the measure of contribution, so that it seems almost reduced to a simple rule of proportion. Some difficulty, I apprehend, will arise in levying the covering quota for those labourers, who work by the job, and others, particularly mechanics, who divide their time among different employers. Nor can I discover, how the covering quota will be levied among manufacturers, where some hundreds are employed by the same person, without bearing hard on the employer, or being, in some measure, ineffective. But these and other smaller impediments, I have no doubt, will vanish upon maturer consideration. I ought to apologize for thus obtruding my surmises. I was almost tempted to hint to you a

mode of contribution, which occurred to me, whilst making the above calculations; it appears to me to wear some degree of plausibility; indeed I can see but one very material objection, and that does not lie sufficiently within my reach, to judge whether it may be surmountable or not. If it be practicable at all, I think it may be so with ease; it may be immediately effective to a certain extent, and the poor rate annihilated in a much shorter time than I can discover by any other way. I am not so sanguine, however, as not to confess, that more enlightened politicians may start more serious, and probably fatal, objections. I forbear to mention it, fearing it may tend to confuse your present plan; and rather wish, if your present engagements will admit of a moment's attention to the conjectures of a minor politician, to be encouraged by your opinion, as to the probable duration of the Income Bill, or one on the same principle.

AS the basis of the following outline, I beg leave to lay down two positions. It is incumbent on every individual in a state, while young and able, to make some provision for old age and inability. The truth of this, I believe, will not be disputed even by the poor themselves. The deficiency, which in many cases will necessarily attend the utmost exertions of some, ought to be

supplied by the better fortune of others. This is sanctioned by present usage, and enforced by the laws. But the mode of assessment now in use falls very heavy on some kinds of property, while others are totally exempted, contrary to equity, and, I believe, to the very law, by which the assessment is enforced. Lord Mansfield's decisions, as to what property is rateable, by 43d Eliz. (the basis of the poor rate) were in conformity to the usages of parishes, rather than to the strict meaning of the act; because, as he confesses, he was unwilling to discuss the general question, on account of the difficulty of ascertaining personal property. Lord Kenyon inclines still [redacted] to rate all kinds of property, from which any income is derived. If the act will really bear this extensive construction, it would be needless to insist on the just observation of Sir F. Eden, " That commercial proprietors, who have been the cause of the great increase of the poor, ought to contribute to their support:" since the difficulty of assessing such property seems to have been the only thing, that has prevented its being hitherto rated equally with any other. If that difficulty should by any means be done away, it might not be unreasonable to propose, that advantage be taken of such a circumstance. Now, I think, that it is possible, that it may be on the point of ceasing to interfere. I should be more confident in this, could I have prevailed on you to express your opinion in favour of the continuance of the income act. If only the principle of the bill continue to

be acted on, though not to the present extent, it would be sufficient for all the purposes of the following plan:

Assessment in three Classes.

1st Class—On Income of 60*l.* or upwards, after the rate of 6*d.* per pound, (or any other rate likely to answer).

2d Class—Of 4*d.* per week on persons (male or female) having income less than 60*l.* but who are rated to the assessed taxes.

3d Class—Of 3*d.* per week on persons (male only) whose income is less than 60*l.* who are not rated to the assessed taxes, and who earn not less than 6*s.* per week.

In calculating the probable amount of these assessments, I ought to observe, that the data within my reach being very imperfect, my estimate must of course be so too. I state it, however to you, just to show what grounds I had for supposing the efficiency of this mode of assessment.

		£.
Estimated amount of 1st Class.	Taking Mr. Pitt's general estimate of taxable income, 100,000,000*l.* at 6*d.* per pound — —	2,500,000

			£.
		Brought forward	2,500,000
2d Class	—	The official returns state about 400,000 persons as paying assessed taxes under 20*s*. These I take to come within the description of the 2d class. —At 4*d*. per week — —	346,632
3d Class	—	1st. Servants in families which pay assessed taxes above 20*s*. suppose one to every two such families, 200,000 at 3*d*. per week — —	130,000
		2d. Fathers of families 600,000, at 3*d*. per week — — —	390,000
		N. B. Mr. Pitt has taken the fathers of families not paying assessed taxes at this number; and I suppose one of each family to come within the description of the 3d class	
			3,366,632

A part, say the assessment of the 2d and 3d classes, might be immediately applied to the relief of the 3d class (and indeed of the 2d, should they be reduced to want it, which may be ascertained by fixed rules). Consequently the poor rate would in some degree

be immediately relieved. The assessment of the 1st class might be vested in a fund, and accumulated annually by compound interest. And supposing two millions and a half to be the amount of this assessment, in thirteen years a capital would be raised of forty millions: the interest of which, with the subscriptions of the 3d class only continuing, might be sufficient, considering the probably increasing state of industry, to maintain the poor without any further assessments of the 1st and 2d classes (except voluntary contributions, which, in case of reverse of fortune, might entitle them to a pittance), or, as at present, of parishes. The families, including wife and children, might be relieved; tables of allowances being made for all admissible cases. The fund might be national, not parochial, nor local. Then it might not be too much to presume, that almost all the poor laws would be useless, and that in particular all the difficulties attending removals, settlements, &c. would cease. During the accumulation there would be full time for arranging the method and rules for administering relief in future, which should be as simple as possible. Other remarks might be made on the advantage likely to arise from such a plan, as likewise to further the execution of it. But I wish only at present to give you a general idea of what has occurred to me on the subject, and shall be happy, if it suggests a single improvement, which may be incorporated with your own. Besides the difficulty, which may arise from a discontinuance of the Income Act, I now see another,

which may have considerable weight, viz. the disposal of the annual assessments of the 1st class. The funded debt it seems will not very well bear an addition: though I should not hesitate to let Mr. Pitt have the use of it. I forgot to mention another class of persons, who may be benefited by such a fund, viz. single women, but who probably ought not to be compelled, as, by marrying, they would be provided for as part of the husband's family. But were they left to their choice and only invited to subscribe, and their subscription to entitle them to an allowance, when necessary, in their single state, and to a proportion added to that of their husband, when married, there is no doubt, but great numbers of female servants, and others of a similar rank and ability, would gladly avail themselves of such permission. It might be considered, and would in fact be a marriage portion for them.

Thus, then, the author has fairly laid the whole matter before the public. He has given the opinions on both sides, and also the plans of others, though in opposition to his own. He hopes for discussion; he expects opposition: he aims at improvement.

These were his reasons for consulting individuals in the first instance; they are still his motives for offering his opinion in print. He now leaves it to its fate.

IMPLEMENTS OF HUSBANDRY, MACHINES, &c.

IT would have been unpardonable in any one, holding such a situation, as the Presidency of the Board of Agriculture, not to have collected in any country he might visit, that, which may be thought serviceable to his own. For it is said, and with great truth, that there is none, however unenlightened, from which something may not be learnt. Such things, as did not apply to the husbandry of any part of this kingdom, are passed over unnoticed; and those, adapted to our use, are recorded. The reader may rely on the following descriptions and plates. Nor will the author be found guilty of any flights of fiction, too common in modern accounts. It may be necessary just to hint at this, because a late writer, in his Tour through Portugal, without at all intending to mislead, has given a sketch of a Portuguese team, in which,

besides caricaturing the oxen, which are of the very handsomest class, from inattention, or, as is more likely, from a previous ignorance of the subject, has altogether mistaken a very material circumstance, the principle of draught. He represents them as drawing by two boards across the forehead of each ox, fastened to the pole; whereas the whole kingdom is not supposed to produce one such instance. This inattention is most general, much to be lamented, and originates in the neglect of making the study of husbandry a part of our early education. A Roman writer complains, that every art was taught methodically, whilst that of husbandry was neglected. And to this day the same complaint may with equal truth be made.

Husbandry should form a more leading part of our education at public schools. Many well-known authors have written correctly and classically on the subject: Varro, Pliny, Xenophon, Columella, and many others. Few are instructed in such works of these authors as relate to husbandry. The Georgics of Virgil stand alone

an exception to this general neglect. Even here, beautifully as the subject is treated, it for ever gives place to the Æneid, a long and well-told story, but, though more amusing, certainly less useful to a modern Englishman. Of the others no translation has reached the author, except that of Xenophon's "Treatise of Household," which is not easily met with just now, nor is it a very modern performance, as the preface will indicate:

To the Reder.

This boke of Householde, full of hyghe wisedome, written by the noble philosopher Xenophon, the scholer of Socrates, the whiche for his swete eloquence, and incredyble facilitie, was surnamed Musa Attica, that is to say, the songe of Athenes: is ryght counnyngly translated out of the Greke tonge into Englyshe, by Gentian Hervet, at the desyre of Mayster Geffrey Pole, whiche boke for the welthe of this realme, I deme very profitable to be red.

That a good translation of Columella, "De Re rusticâ," does not exist, is for all our sakes to be regretted. He it is, by the by, who breaks out into

the complaint, that every trade was taught, whilst husbandry, that most useful one, was omitted.

Atqui ego satis mirari non possum, quod qui ædificare velint fabros et architectos advocent; qui navigia mari concredere, gubernandi peritos; qui bella moliri, armorum et militiæ gnaros—Sola res rustica, quæ sine dubitatione proxima, et quasi consanguinea sapientiæ est, tam discentibus egeat quam magistris.—— Agricolationis doctores qui se profiterentur, neque discipulos cognovi.—At sine agricultoribus nec consistere mortales, nec ali posse, manifestum est. *De Re rusticâ, in Proem.*

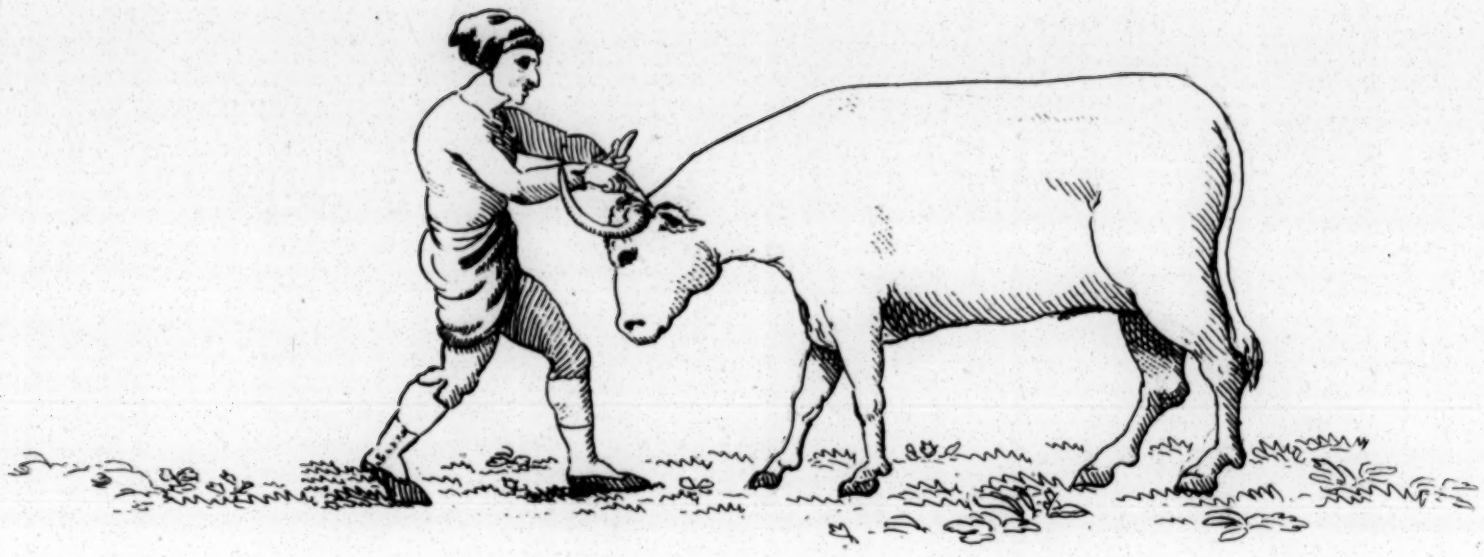
These works in their original language are now of little use to the farming world; for the scholar, who translates, rarely knows how to apply, what he translates, to the practical purposes of modern husbandry; and he, who could apply them, rarely knows how to translate them. It is a matter of regret, that, as a part of their exercise, public schools do not each furnish us with a well-digested translation of these authors, when we consider the infinite importance of the subject: an art, as Cato expresses himself, " maxime pius

quæstus et stabilissimus." It is probable, that of our young men at public schools, some may possess a natural turn for this art, and others may by these means acquire it; which at so early an age is almost the same thing: but it is not so later in life. How much precious time is there lost in making verses, in ransacking the brains of young men for hexameters and pentameters, in qualifying them for poets, as if the poet could be made, when the Latin adage says, and all the world knows it to be true, "Poeta nascitur, non fit." Nevertheless, on we go full in its teeth, as if the reverse were true, and none were born, but all could be made, poets. At the head of one of our public schools there is a man, Dr. Drury, whose leisure moments are bestowed on husbandry, not only theoretical but practical; and with such success as to draw from neighbouring farmers a confession, that they have profited by his example; no common confession for such men to make. To this gentleman it would be no punishment to correct a work of this sort, nor could the young men at Harrow employ

their time more to the benefit of the public or themselves than in translating it. The same observation applies to our universities, for there is no Professor of Agriculture either at Oxford or Cambridge: and yet of those educated at each, one third possibly will have no other employment than to take care of their own estates, and from the want of which early knowledge they are driven to depend on those, whose interest it too often is to mislead them. Another third part of our young men educated at universities are allotted to professions, in which a knowledge of husbandry would be of infinite utility. If this were otherwise, the abilities of those considered, who sometimes have occasion publicly to discuss this subject, it would be differently treated, than in some instances of late it has been.

It had been a favourite object with many to introduce into this kingdom, that mode of slaughtering cattle, by a separation of the spinal marrow, which is practised in many parts of the world, and with all

B[illegible]L



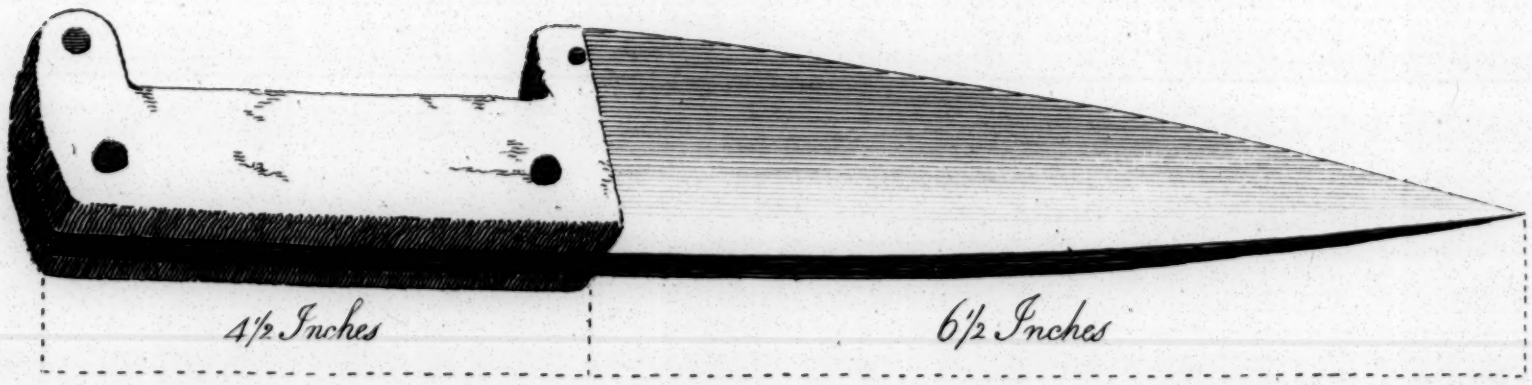


PLATE. I.

Wm. Poole

possible success, as well on the score of humanity as expedition. The term itself, "to lay down cattle," bespeaks the mildness, with which it is executed. The author, therefore, on his arrival in Portugal, made it his business to have a person instructed in the use of the knife, which is represented in Plate I. and is used for this purpose with great adroitness. An idea prevails, that there is much cruelty in the use of the English axe, but it rarely happens, that a bullock is not stunned, or that he does not fall, after the first or second blow; the idea, however, does not exist, and therefore the practice ought no longer to prevail, when a better may be so readily substituted. It sounds as if "knocking down" was a movement as rapid in effect, or more so, as "laying down;" but in this case it is far otherwise: for the fall is instantaneous, so much so as sometimes to alarm those, who look on; the animal at the first touch of the spinal marrow being unnerved from head to foot.

The person alluded to has "laid," without being headlined, fifteen oxen in a row, with more regularity

and expedition than would at first perhaps be credited. Holding them only by the horn in the left hand, standing in front of the animal, and passing the knife over its brow, through the vertebræ of the neck, into the spine. The method in that country of the carter walking at the head of his oxen, when at work, may probably induce them to stand quieter, than would otherwise be the case. Should that be the fact, cattle in this country may be headlined as usual, and the operation then is as safe as it is easy.

Without trespassing further on the reader's patience, it is better to say, that if, in any public slaughter-house, the men, whose business it is, shall express a desire to be instructed, and make a request to this effect, it shall be complied with. After a few trials they would be competent to teach others.

Windmills around Lisbon are of a construction in some respects different from, and probably superior to, those of England in respect to their sails. A repre-

750

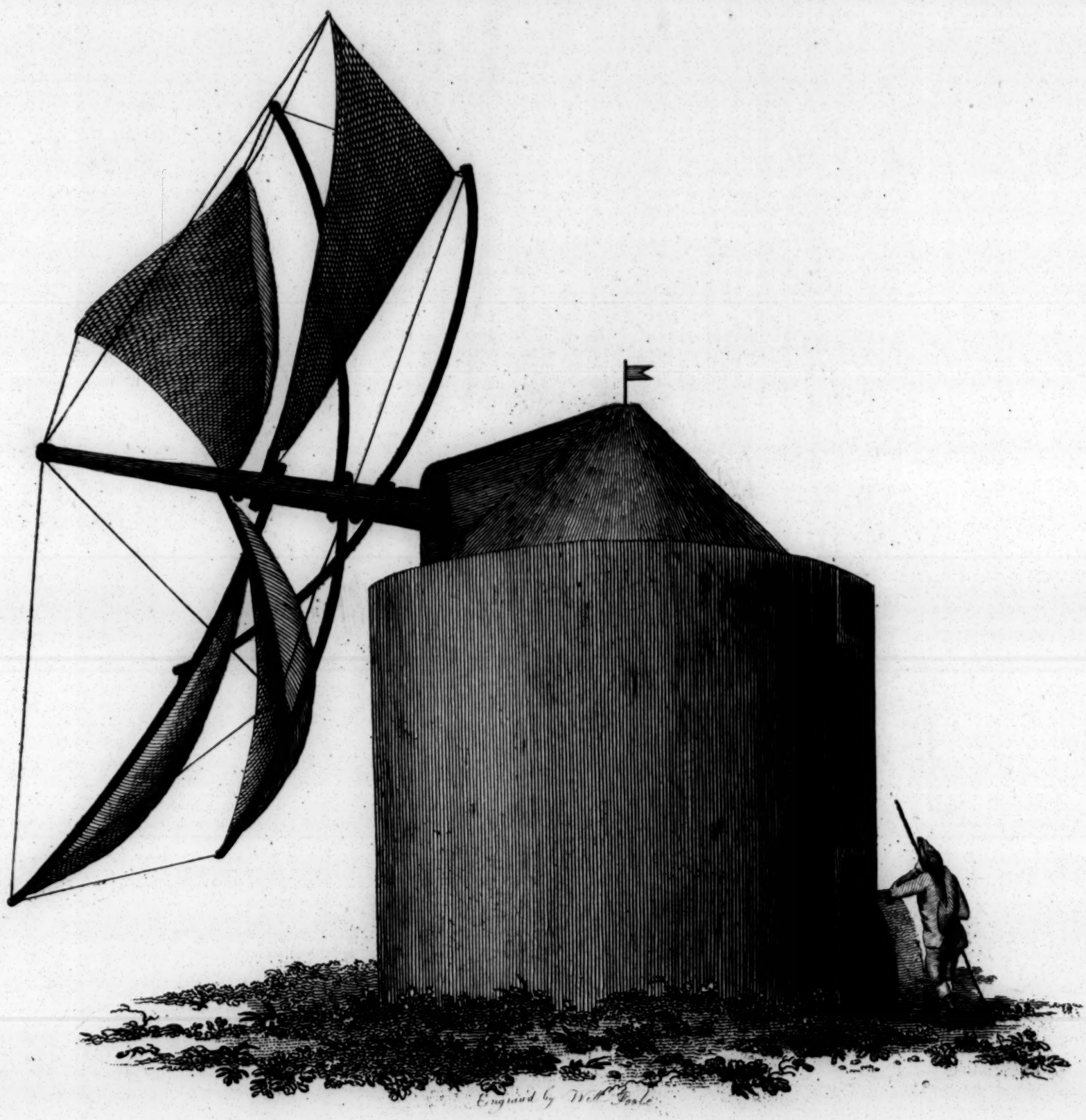


PLATE . II.

sentation of one is given in Plate II. The advantages, arising from this construction, appear to the author to be these: first, that the broad part of the sail is at the end of the lever (that is, the end of the branch), and therefore, that equal resistance can be overcome with less length of branches, or arms. These being shortened, much weight of timber, both in the arms and in the spindle, may be saved; which will also occasion a saving of expense in the height, prime cost, and future repair of the mill. Secondly, it is observable, that the sails may be set to draw like the stay-sails of a ship; and therefore, filling more than those in England, will require the mill to be brought less often to the wind, which must ever be a trouble, however light or heavy the whole machinery may be.

The necessity of depending on France for a supply of mill-stones from the vicinity of Bourdeaux had long engaged the Board's attention. And quarries of this stone having been found in North Wales, much pains were taken to obtain a coasting passage

for them, duty free; but without effect: the Custom-house, after many deliberations, having stated the impossibility of complying with such a request. It was, therefore, the author's duty, as well as wish, to pay every possible attention, to what had appeared to interest it; he therefore finding stones in the vicinity of the Tagus of such a quality as to grind down corn, which our stones hitherto imported from France were unable to do, he shipped for the use of the Board two pair of the Passo d'Arco mill-stones; and at the same time sent such various samples of corn from Barbary, the Levant, Russia, Spain, and Portugal, as were known to be genuine. These were sent, not only because such an institution ought to be in possession of samples of every kind of grain, which may be applicable to British husbandry, but also, because some of these grains are said to be too hard for the mill-stones now in England. The Passo d'Arco stones are much used in Spain; the greater part of which country could be supplied from Bourdeaux at a less expense. We may, therefore, fairly conclude,

that the former are more suited to the corn of that drying climate. In this case, by procuring stones capable of grinding such corn, a new market is opened, from whence corn may be imported; more especially, as the freight would be low; because the wool and cotton ships from Lisbon, which must otherwise be supplied, can afford to carry them home as pig-ballast at a very low rate. Some papers on this subject are in the author's possession for the use of the Board.

The heat of the climate has taught Portugal as well as Spain the value of water, and ingenious methods of conveying it by aqueducts across roads and valleys. Nor is ornament an object in the far greater number; they being constructed on a cheap and simple principle, and extending sometimes to great distances. This principle may occasionally apply in our hilly districts to the purpose of irrigation with much success, as well as to the supply of houses, water-mills, and canals; indeed it has been applied occasionally for the two latter purposes. The author has seen a

high garden-wall supply the place of an aqueduct. In another instance, where the spring lay in the lower end of a vineyard, he has seen the water raised by a wheel 15 or 16 feet high, and there delivered into an aqueduct, from whence it conveyed itself to the top of the same vineyard. These principles may apply to our domestic purposes as well as to husbandry in various instances, where we might not have supposed water could be brought.

In the use of the hoe (see Plate III.) they excel in a very great degree. The strong land in their vineyards, which must be dug by hand, could not be worked by hoes, upon a construction common with us; but the handle being short as well as light, the hoe by its own weight, and conical form, cuts deep without much exertion. They, who have seen these implements at work, will bear testimony to their extraordinary powers. Mr. Mark Ducket, in his ingenious invention of a hoe for cleaning crops of all descriptions, whether drilled, or hand-set in rows,

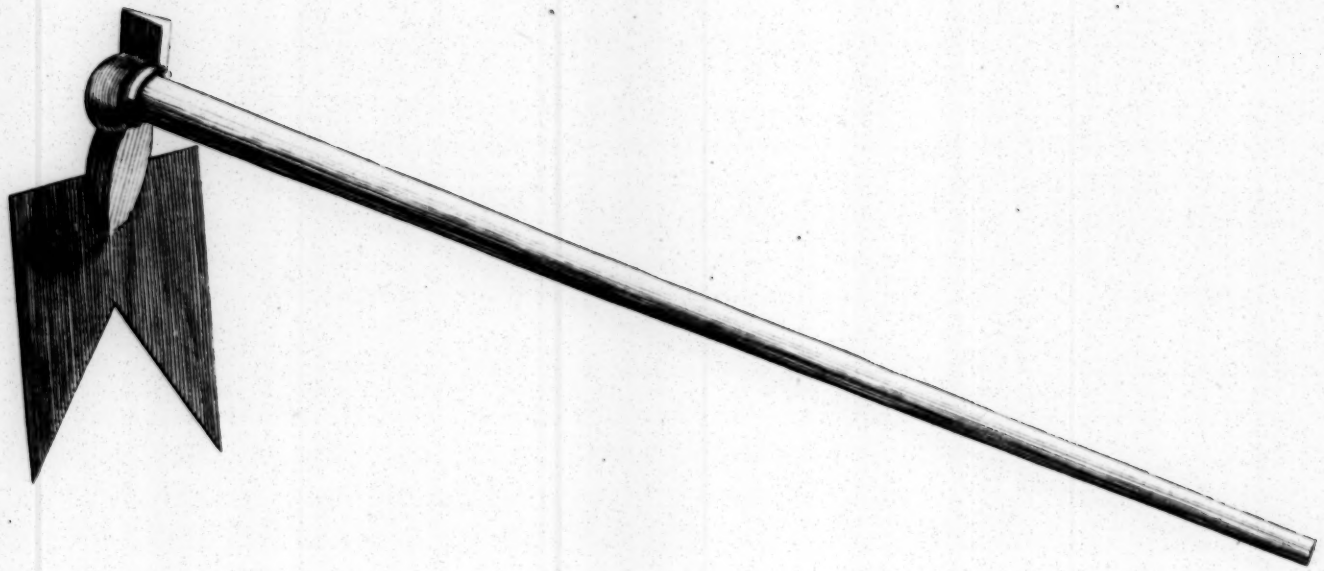


PLATE. III.

seems to have availed himself of a short handle and heavy iron-work, the exact reverse of our common hoe, which, except on the lightest sands, demands great exertion to make any impression whatever, if the soil be dry.

The inhabitants of mountainous districts on many parts of the continent set us excellent examples, by taking advantage of every spot of soil, however steep and difficult of access, and turning it to the use of vegetation. Nor could this be effected by any better implement than the Portuguese hoe. This hoe the author has put into the hands of a West India gentleman, Mr. Farquarson, for the use of our colonies, who was bound to the West Indies, and driven into the Tagus in distress. The author happening to express his regret, that he had not, just then, the means of obtaining for him Mr. Ducket's hoe, which in conjunction with the other would form a complete system of hand-culture, where hand-culture was requisite, was surprised and gratified to learn, that some

dozens of these hoes were actually on board the vessel for the use of the colonies. It then occurred to him, that he had, in the course of last summer, suggested the use of this implement to a very distinguished personage, who interests himself not a little in the welfare of those islands. But many will suppose, that this hoe, however applicable elsewhere, would be of but little use here. It will, however, appear to be serviceable in many cases, such as digging dung, or compost of lime and earth, angles of fields, where the plough has not room to act, very steep ground, not so well suited to the spade, foreheads (head-lands), which last practice is well understood in the vale of Taunton, and recorded by Lisle, even in his time, as an admirable practice of long standing there (See an account by the author in Annals of Agriculture, 1798). It will also be found useful in hand-digging orchards and plantations, the young trees of which will not only thrive better for such treatment, but might supply abundant crops of potatoes to the proprietor and labourer. If, in this case, the former finds land and

manure, and the latter finds labour, the crop may be divided between both; but, if no dressing can be afforded, the whole crop should be the labourer's, because the landlord will derive an ample benefit from the improvement of his timber, provided the crop be dug with care. The grass of plantations seldom turns to any account, nor is much good derived from that of orchards, for it is of a cold and sour nature, owing to the shade; and little proof will ever be found in it, as hay, unless sprinkled with salt. It is probable, that orchards would derive as much benefit from the use of the hoe as plantations.

The ploughs of Portugal are not of a class to merit much attention, the turn-rest plough on truckle wheels, which is used sixty or eighty miles north of Lisbon, cannot be worked with a pair of oxen, being heavier in draught than the swing plough of that country, as is natural to suppose. This plough is described by Du Hamel, in his Elements of Agriculture, as a plough well known in many provinces of

dozens of these hoes were actually on board the vessel for the use of the colonies. It then occurred to him, that he had, in the course of last summer, suggested the use of this implement to a very distinguished personage, who interests himself not a little in the welfare of those islands. But many will suppose, that this hoe, however applicable elsewhere, would be of but little use here. It will, however, appear to be serviceable in many cases, such as digging dung, or compost of lime and earth, angles of fields, where the plough has not room to act, very steep ground, not so well suited to the spade, foreheads (head-lands), which last practice is well understood in the vale of Taunton, and recorded by Lisle, even in his time, as an admirable practice of long standing there (See an account by the author in Annals of Agriculture, 1798). It will also be found useful in hand-digging orchards and plantations, the young trees of which will not only thrive better for such treatment, but might supply abundant crops of potatoes to the proprietor and labourer. If, in this case, the former finds land and

manure, and the latter finds labour, the crop may be divided between both; but, if no dressing can be afforded, the whole crop should be the labourer's, because the landlord will derive an ample benefit from the improvement of his timber, provided the crop be dug with care. The grass of plantations seldom turns to any account, nor is much good derived from that of orchards, for it is of a cold and sour nature, owing to the shade; and little proof will ever be found in it, as hay, unless sprinkled with salt. It is probable, that orchards would derive as much benefit from the use of the hoe as plantations.

The ploughs of Portugal are not of a class to merit much attention, the turn-rest plough on truckle wheels, which is used sixty or eighty miles north of Lisbon, cannot be worked with a pair of oxen, being heavier in draught than the swing plough of that country, as is natural to suppose. This plough is described by Du Hamel, in his Elements of Agriculture, as a plough well known in many provinces of

France. It has one handle only, and that far too short; but this signifies little, where there is a wheel; for it is for the ploughman's ease, that the contention should lie between the wheel and the point of the share, not between the point of the share and himself, as is the case in swing ploughs. On this subject the author has gone more at length in his Principles of two-furrow ploughs. (See the second volume of Communications.) The Portuguese turn-rest plough does not make bad work; if the same could be said of the swing plough used in the vicinity of Lisbon, it would be well. Any description, which cannot instruct but may offend, is better omitted. Suffice it to say, the implement forms a strong contrast to the beauty of the animals, who work it.

The power of Portuguese oxen in draught, more particularly in the streets of Lisbon, has oftener been a subject of surprise to strangers than of admiration, as it ought to have been: heightened also, as in the instance just mentioned, by the deformity of the tum-

BSL

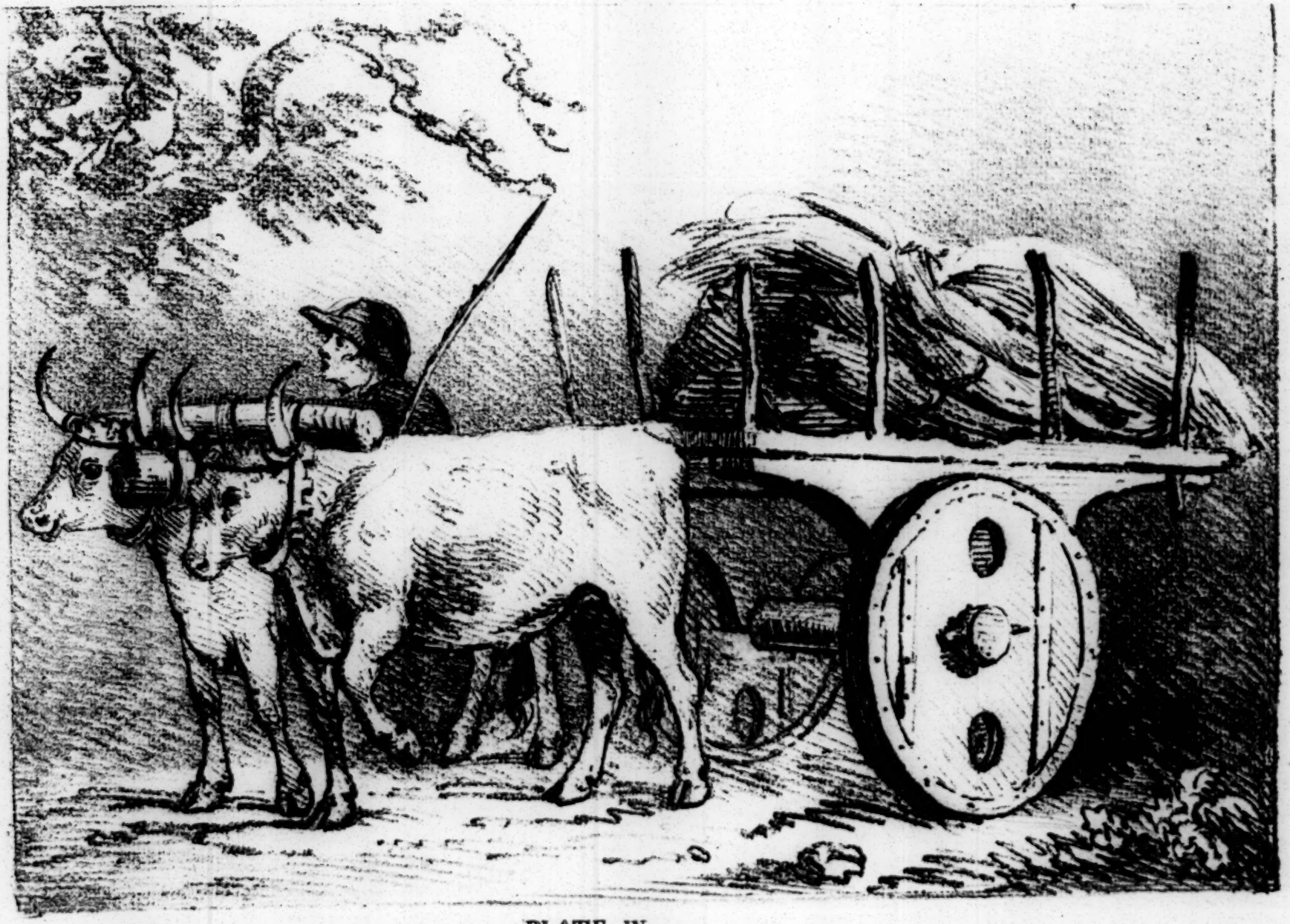


PLATE. IV.

Fig. 2.

Fig. 1.

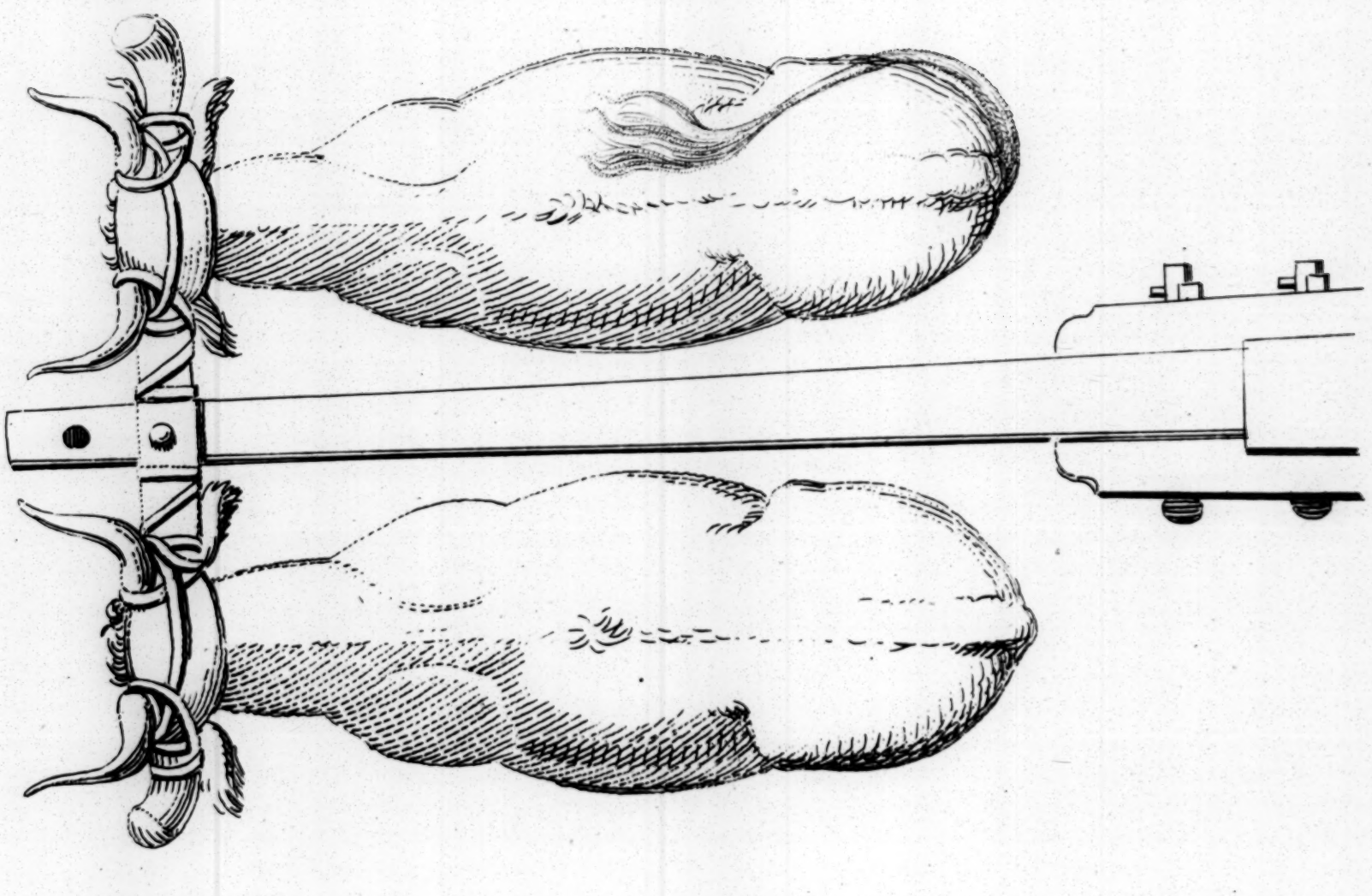


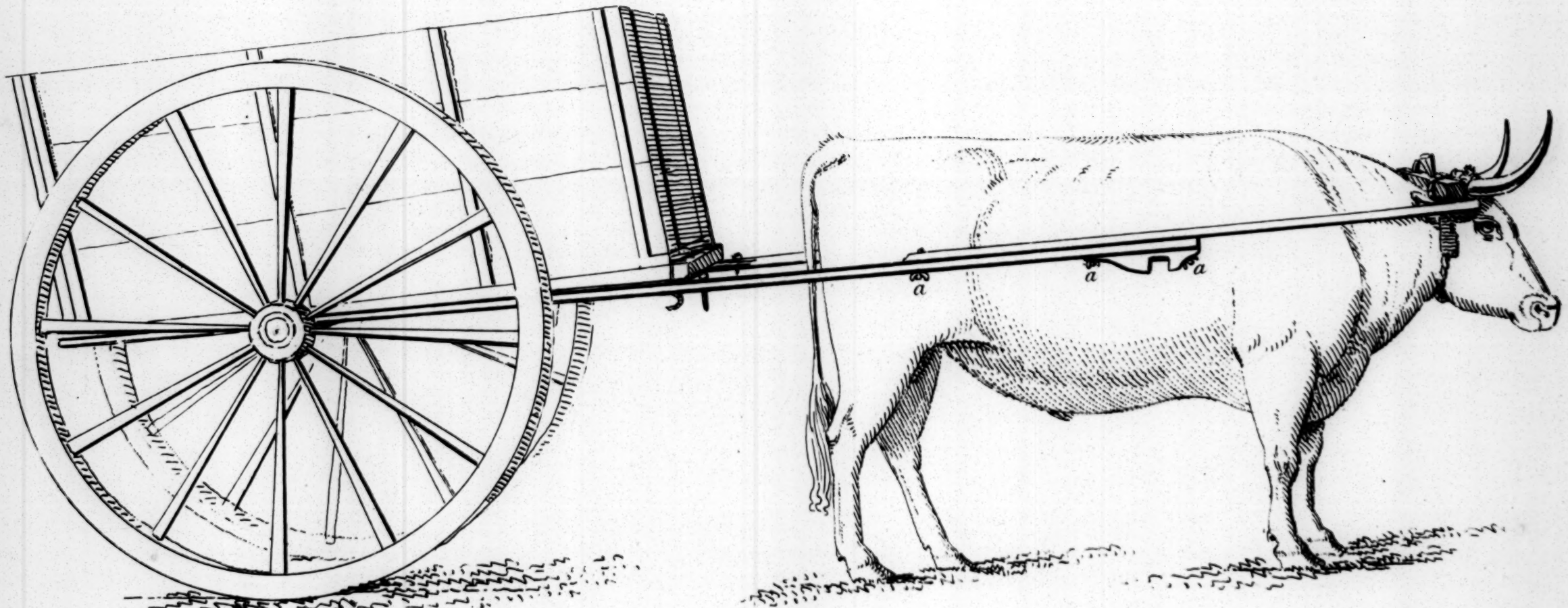
Fig. 3.

Fig. 1. French Method of Yokeing Oxen.

2. Front View of the head of the Oxen.

2 Front View of the head of the Oxen.

B L



A one Ox Cart which by three Screw & Nuts a.a.a. Changes to a Horse Cart

brel they draw. The principle of draught is a joint power of the neck and base of the horn, a purchase as great, perhaps, as can be given to the animal. This is effected by a long leathern strap, which is wrapped round the yoke, from thence round the base, or bottom, of the horns, and again fastened to the yoke. A plate is given representing this principle, and another representing the mode of draught in France, long used and held in much estimation. (See Plates IV. and V.)

The first observation made by an English carter on the Portuguese mode of draught, that it would steady the heads of cattle in drawing, thereby rendering them abundantly more tractable and easy to direct, was perfectly just. The whole draught labour of Lisbon is carried on by oxen only, as in Plate IV. except that, for want of space, the carter is not placed, as he ought to be, at the head of his oxen. They follow him, and so carefully, as seldom or ever to run against each

other, however narrow and steep the streets may be. Before we proceed to the comparative power arising from the different modes of draught as applicable to oxen, we beg leave to disclaim any preference of one mode to another, being fully persuaded, that, whether worked in harness, or in the yoke and bow, as in England, by the joint power of the yoke and horn, as in Portugal, or by the head, as in France, they cannot fail to benefit their employer. As, however, the yoke and bow has prevailed for a considerable length of time, for the Scripture says, "I have bought five yoke of oxen, and I go to prove them," it is probable, that the practice may still prevail; in which case the Portuguese mode of draught will apply with the utmost ease and success to our yoke and bow so as gradually and imperceptibly to cheat oxen into its use. This in itself is an obvious advantage, because it gives two points of draught instead of one, and thereby relieving each admits of a lighter yoke, which in this country has ever been far too heavy and oppressive; and if hereafter the

French method should be preferred, for which there are not wanting advocates, it is the best preparatory step to its introduction. It would be almost superfluous to remark, that the strong points of an ox are in his head and neck. It is ordained by Nature, that where the strength of an animal lies, there he will resort for defence, the horse to his heels, the man to his arms, and the ox to his head; and in cases of the greatest exertion, the last ever puts his nose close to the ground.

The author, on a former occasion, hinted at a cart for two oxen capable of carrying 45 cwt. but aided by every advantage of iron axletrees well greased, wheels of a just height, so as to present the best point of draught, and the cart weighing about 740lb. Any man, who doubted the power of two oxen to be equal to such a weight, would convince himself in the streets of Lisbon, that it can be, and is, done every day. The resistance, that arises from a body of friction, such as is to be seen in the axletree, fixed to, and turning with,

the wheels, sets calculation almost at defiance. The precise weight of a load is not easily ascertained, for weighing machines and turnpike roads do not exist. It was, however, in one instance, where the contractor for beef regularly delivered the given quantity of 20 cwt. The nature and value of the load was sure to ascertain the accuracy of its weight. The circumference of the axletree is from 22 to 19 inches, in proportion as it is more or less worn. The body of this cart weighed about 9 cwt. and was supported on the axletree by two stays, 5 inches wide, which clipt the axletree behind in the same proportion as it does before, amounting to about half its circumference. The yoke of oxen, which constantly worked it, were not larger than a yoke of the North Devon, or small Sussex breed. The pavement is not very smooth, either in the streets or the roads, for all is pavement, but more steep than can well be conceived. Under these circumstances we are to consider the load, which is 20 cwt. the cart 9 cwt. for the "timon," or pole, as well as the body, is clumsily constructed.

This 29 cwt. did not move on iron axletrees well greased, but on 100 square inches of timber exposed to dirt and gravel, without greasē; that is, the two stays of 5 inches each bearing against half the circumference of a 20-inch axletree, making 50 inches each. The weight of such a load, with such a friction, is so infinitely greater than upon our principle of wheels, as to render all comparative calculation useless. Certain it is, that the author has repeatedly seen loads heavier than this, which he has now adduced, because he knows this statement to be correct. It is a rare thing to see in the streets oxen low in condition; and though pasture grass is unknown in the country, they are generally kept in the highest order possible, almost fit for the butcher; except when very old, for they are worked to a great age: and yet their feet rarely suffer, notwithstanding the great exertion such heavy loads and steep streets require.

The author did not profit so much from such an example, as some would have done, for he was bred in a country where farming business is very much carried on by oxen; and for this plain reason, that the breed is well adapted to labour. Let those, who maintain that oxen are unfit for road work in England, consider well these plain facts, and if they still doubt, let them seek conviction; the voyage, on this score alone, will pay them, for the existing scarcity renders this a matter of no common importance to the community. It is not the attempt of a capricious individual, practised to-day and abandoned to-morrow, but the established system of a nation; and in the instance above cited, Lisbon, most successfully carried on under a pressure of circumstance at first sight adverse. The commercial business of sea-port towns, in some parts of our own kingdom, is carried on by oxen, as it was at Bourdeaux some years ago, and is said to be now at the Cape of Good Hope—indeed, wherever a good breed of oxen exists. Where a coarse inactive breed prevails, the whole country must have recourse to

horses. The most valuable breeds of oxen at Smithfield are also the most approved for work, because of a size well adapted to labour. The Hereford, Sussex, Devon, Glamorgan, and Pembrokeshire oxen maintain their ground against that innovator the heavy corn-eating cart-horse, and will continue to do so. A most successful example is here set us, and on a great scale, by Him, whom every man should be proud to follow. The number of oxen in his Majesty's work, and other particulars, have been before hinted at in these pages; they are elsewhere more fully detailed. It is a subject, on which too much cannot be said, an example, which cannot be too quickly followed. It is for ever before us, but too often superficially and selfishly discussed. Men reason on their own individual usage, and draw conclusions applicable to the whole kingdom, from the practice of two or three solitary parishes.

It is observable, that on all subjects men are apt to be most bold in assertion, where they are most

deficient in knowledge and proof. To give opinions or make assertions on subjects so extensive requires more preparation, more reflection, and more panoratic knowledge than men seem to think necessary. There was one, Anthony Fitzherbert, who, from long practice, as well as general erudition, may be thought well qualified. To this day he is called the father of British husbandry.

Whether is better a Plough of Horses, or a Plough of Oxen.

It is to be known, whether is better a plough of horses, or a plough of oxen, and therin mesemeth oughte to be made a distinction. For in somme places, a horse plough is better, that is to say, in every place, whereas the husbande hath several pastures, to put his oxen in, whan they come fro theyr warke, there the oxe ploughe is better. For an oxe maye not endure his warke, to labour all daye, and than to be put to the commons, or before the herdman, and to be sette in a foulde al nyghte without meate, and go to his labour in the mornynge. But and he be put in a good pasture all nyghte, he will labour moche of all the daye dayely.

And oxen wyl plowe in tough cley and upon hylly grounde, whereas horses wyl stande styll. And whereas is now suerall

pastures, there the horse plowe is better, for the horses may be teddered, or tyed upon leys, balkes, or hades, whereas oxen may not be kept: and it is not used to tedder them, but in fewe places. And horses wyl goo faster than oxen on euen grounde or lyghte grounde, and be quicker for carriage, but they be farre more costly to kepe in wynter, for they must have bothe hey and corne to eate, and strawe for lytter, they must be well shodde on all foure fete, and the gere, that they shall drawe with, is more costly than for the oxen, and shorter whyle it wyll last. And oxen wyll eate but straw, and a lyttel hey, the whiche is not halfe the coste that the horses must have, and they have no shoes as the horses have. And if any sorance come to the horse, or waxe olde, broysed or blynde, than he is lyttel worthe, and if any sorance come to an oxe, waxe olde, broysed or blynde, for ii s. he may be fedde, and than he is mannes meate, and as good or better than ever he was. And the horse, whan he dythe, is but caryen. And therefore mesemeth, all thynges consydered, the ploughe of oxen is much more profitable than the ploughe of horses.

It must not be forgotten, that this comparison was made, when oxen were not shod, a circumstance, which makes the whole difference in their work on roads and pavements, as well as on an active class of cart-horse most unlike that of the present day. This

quotation immediately follows a dissertation on ploughs, and their construction, which, perhaps, would do no discredit to a modern mechanic, not even to a Ducket, a Tugwell, or a Cully. He lived in the reign of Henry VIII. And from that time to the present day those, who have reasoned most deeply on the subject, have ever been of the same opinion. The scarcity, however, of these days will most probably impress this opinion on the minds of all men in a still greater degree than heretofore.

It is a circumstance to be remarked, that the breed of heavy cart-horses began to prevail about the year 1754, and is to this day progressively spreading itself over the kingdom, trespassing in many instances on its natural inhabitant, the ox. About the very same year our exports of corn began to slacken; and they have kept pace nearly together. In the year 1774, these exports, except in an instance or two, altogether ceased. From that time the import commenced, and has increased to this day, together with the use of

overgrown cart-horses, to a most alarming degree. Such a concurrence of facts and dates may at first surprise, but will lead men to reflect most seriously. We are told, in Kent's Report of Norfolk, a well-farmed corn county, that, on average of three years, the import of oats in that county alone exceeds its growth by 15,389 quarters (eight bushels) nor is there a waste of idle mouths, for the horses of that county are an active race, two only working in a plough, an economical and vigorous system of husbandry. If it were otherwise, the balance against us would be fearful to record.

Divine Providence has willed, that the produce of the last harvest should be scanty. The dearth has been patiently borne, but severely felt. The present season gives us every hope, that it will soon be done away. To guard against its return becomes a solemn duty with all men: many have suggested plans to this effect; amongst others a general enclosure bill.

The author has been supposed to be no friend to such a measure, because it does not form a part of his first Address, or Outline, to the Board; and this supposition has, in a great degree, been sanctioned by an insertion of the paper alluded to in the last volume of the Bath Society's publication. Such a conclusion was not then to be drawn from his silence on the subject; for the success or failure of most things depend on their being well or ill timed; and it must be allowed, that, existing circumstances being the same, the true moment to introduce any proposition, is not precisely that, when it had just before been rejected. He is an advocate for enclosure bills; a general one, if it is practicable to harmonize so many jarring interests; for he thinks such wastes and unprofitable commons, those near the metropolis more especially, disgraceful to an active and enlightened nation like this. But, if he thought, that such enclosures would fill up that deficiency in our stock of food, which compels us in all seasons to resort to imports, and would just now make

the difference between dearth and plenty, he would deceive himself.

The first idea, suggesting itself to many, will be, that we are taught of late by a clear and most convincing statement of Sir John Call, which gives reason to suppose, that the population of this kingdom has greatly increased: and in support of this population our corn is employed, not on cart-horses. In reply to which it may be contended, that in the last twenty-seven years 1280 bills of enclosure have passed, and many of these in our strongest and best land, witness the counties of Somerset, Lincoln, &c. But in the seventy-three preceding years only 851*. But let us

* The following statements are from the records of Parliament.

An Account of the Number of Enclosure Bills which have passed from 1700 *to* 1773, *both Years inclusive, distinguishing each Year.*

1700	—	0	1706	—	0
1701	—	0	1707	—	0
1702	—	0	1708	—	0
1703	—	0	1709	—	1
1704	—	0	1710	—	0
1705	—	0	1711	—	0

put these 1280 enclosures out of the question, we

	Brought forward	1
1712	—	0
1713	—	1
1714	—	0
1715	—	0
1716	—	0
1717	—	0
1718	—	0
1719	—	2
1720	—	3
1721	—	1
1722	—	0
1723	—	2
1724	—	2
1725	—	4
1726	—	2
1727	—	0
1728	—	5
1729	—	6
1730	—	6
1731	—	3
1732	—	7
1733	—	2
1734	—	2
1735	—	3
1736	—	2
1737	—	3
1738	—	3
1739	—	4
1740	—	4
1741	—	3
1742	—	5
		76

	Brought forward	76
1743	—	8
1744	—	1
1745	—	3
1746	—	0
1747	—	5
1748	—	4
1749	—	2
1750	—	6
1751	—	0
1752	—	5
1753	—	7
1754	—	4
1755	—	12
1756	—	11
1757	—	21
1758	—	17
1759	—	27
1760	—	34
1761	—	21
1762	—	15
1763	—	19
1764	—	37
1765	—	63
1766	—	57
1767	—	48
1768	—	33
1769	—	51
1770	—	52
1771	—	67
1772	—	72
1773	—	66
		851

shall find, that our improvement in the same period, as to the mode of cropping tillage and convertible lands, would, in the opinion of numberless practical men, more than supply this admitted increase of population. The deficiency in our produce may be guessed at from the quantities imported in times of the greatest scarcity. It has long been supposed, that three weeks or a month's consumption have been added to our native stock by importation. The former quantity

An Account of the Number of Enclosure Bills which have passed from 1774 *to* 1800, *both Years inclusive, distinguishing each Year.*

1774	—	61	Brought forward		551
1775	—	40	1788	—	35
1776	—	57	1789	—	33
1777	—	92	1790	—	25
1778	—	64	1791	—	40
1779	—	68	1792	—	40
1780	—	36	1793	—	60
1781	—	22	1794	—	74
1782	—	15	1795	—	77
1783	—	14	1796	—	72
1784	—	15	1797	—	88
1785	—	20	1798	—	49
1786	—	25	1799	—	67
1787	—	22	1800	—	69
		551			1280

was lately given in a public discussion, but we can afford to admit six weeks: and as the island has not even in this season experienced an absolute famine, but may carry itself on to the ensuing harvest, we may reasonably conclude, that such is the deficiency in the produce. Now it has been stated, about eighteen months ago, to the author, by an intelligent observer, Mr. William Pitt, of Pendeford, in Staffordshire, then a great advocate for that description of animal, that the number of cart-horses employed in Great Britain was about 500,000; of which we are ready to admit, that 200,000 may be useful, the remainder absolutely superfluous. These 300,000 consume, at a very moderate calculation, for nine months out of twelve, one peck of corn per day each, that is, 63 bushels each *per annum*. At 9 lb. per peck, and wheat at 15 lb. per peck (60 lb. per bushel), the fair average weights, 63 bushels of oats equal nearly 36 bushels of wheat *.

* In Scotland, indeed, where oats are the food both of men and horses, this comparison need not be drawn. A man, with a wife and four children, requires on an average about four pecks of good oats per week (10 lb. per peck)—208 pecks, or 52 bushels *per ann.*: a labouring horse a peck and a quarter per day for eight months in the year—280 pecks or 70 Winchester bushels *per ann.*

People may be satisfied with a quartern loaf per week each; of late, indeed, masters of families in London, whose servants were at housekeeping, have allowed them one quartern loaf per week, with which they declared themselves contented. A quartern loaf weighs 4 lb. 5 oz. consequently fourteen quartern loaves work up a bushel of wheat; but two loaves may be allowed for bran and waste in grinding. Twelve quartern loaves remain, which, at one loaf per week, make four bushels and three quarters to each person annually *. It appears, therefore, that one cart-horse moderately, or rather immoderately, fed, consumes more than the corn, or bread, of seven persons, so that

* It is ever adviseable, because the safest, to put statements like these in the most unfavourable point of view possible. A quartern loaf per week, some may think too short an allowance;—to a labouring man in health it probably may be so, but upon the average of the whole mass of population, this calculation is generally thought to be correct. Even upon a deficiency of six weeks in bread-corn, suppose the average consumption to amount to one quartern loaf and a quarter per week, there will then remain corn for exportation, equal to three weeks of the whole consumption. The fact is, a quartern loaf does not take 4 lb. 5 oz. of flour, but only 3 lb. 8 oz. the rest (13 oz.) being supplied by yeast (barm) and water, to say nothing of the profit, on which the baker is supposed to live.

300,000 cart-horses consume annually as much, or more than 2,100,000 persons: which, admitting the population to be 10,000,000, is more than a fifth part of the whole. Here then is a loss of more than ten weeks consumption of the whole kingdom; admitting the import to be equal to six weeks, there will remain for export one month's consumption, or one twelfth part of the whole produce, to say nothing of the supply of beef arising from the substitution of oxen, which of itself would make a very great difference. This calculation is formed from the datum of Mr. Pitt, that we have 500,000 cart-horses, and as the argument was not adduced to serve the author's proposition, but the reverse, should any error be found, it would be more likely to be in his favour; that is to say, the nnmber of cart-horses will more probably exceed 500,000, than come within that number. Not only in this point of view is the effect visible, but the extravagant adoption of this animal cuts both ways; for whilst he eats us up, we do not eat him.

Some will perhaps say, that this argument does not apply, because we are more in want of corn than butchers' meat:—" Down horn, down corn," says the proverb.

The preference has long been given to the ox rather than the horse, the prejudice is strong in favour of roast beef, and there is every appearance of its continuance. Should the taste of the public vary in this particular, a small part of these objections to the cart-horse will lose their effect; still we suspect it will appear, that it is an animal too slow of motion for the general purposes of husbandry. Any horse, heavier in frame than the London coach-horse, or a well-bred Suffolk punch, is too unwieldy for carriages, for the purpose of drawing artillery, for broad-wheeled waggons *, and for every purpose of husbandry, rolling

* Mr. Froment, of Thatcham, in Berkshire, was from circumstances compelled to adopt a system hitherto unheard of, that of working his cast mail, and stage-coach horses in broad-wheeled waggons, which, from a letter from Mr. Pickwick, of Bath, the author just now learns, is still carried on with great success.—See Treatise by the Author, Annals of Agriculture 1798.

excepted. We see this fact acknowledged by the superior practice of many counties; Norfolk, Suffolk, and Yorkſhire, for instance.

The cheapness of work, local circumstances considered, will ever evince the merit or demerit of a system. It cannot be denied, that this animal has encroached on the more useful class of horse, and on the ox: it gratifies our vanity, and consumes that portion of our food, which would otherwise place us above want.

The ſlackening of our exports in 1754, and the introduction of cart-horses in the same year, must induce every man to draw some conclusion from such a singular coincidence of circumstances. These facts came to the author's knowledge, from a conference with Mr. Pitt, of Pendeford, eighteen months ago, and the impression, they then made, is not at all done away.

The statement of such facts as these must invite conclusions, obviously tending to lessen the number of

cart-horses throughout the kingdom. Bounties have been given to encourage the growth of various produce: they may also be given to aid those counties, which, at first, from local circumstances, will be deranged by such an alteration. Among the few, which will be found to merit such assistance, would be Yorkshire; because its husbandry is much carried on by light active mares, whose produce is of great value to the community. Suffolk and Norfolk, because their native breed of horses (the punch) is light and active. Another reason in their favour is, that no good breed of working oxen is yet to be found in Lincolnshire, or the adjoining breeding counties. Much of Scotland stands in the same predicament; but it may be as well to suggest, that the Pembroke is very much of a west Highlander, on a larger scale, which that country will be able, under proper management, to keep up to its full size. The increased demand for working cattle, will be a bounty, and an immense one hereafter, to all the breeding counties whatever.

The extreme of prices, whether high or low, must prejudice equally. A moderate and steady value of produce is that, which will most benefit the landlord and the tenant. When this artificial system, and the consequent forced supply to keep it up, shall fall to the ground, such an equalized value of the landed property will prevail: until then it cannot. Destructive as is the present mode of culture, it cannot be instantly done away. If the Legislature feels it can venture soon to strike at the root of such an evil, in ten years the grievance may no longer exist. During this time we may again feel the pressure of scarcity, though in a slighter degree; but alleviated by the consoling reflection, that hereafter, our children, under Divine Providence, will never know the want of bread.

The author makes no assertions, but he deems it conformable to his duty to state some facts, from which obvious and strong conclusions can be drawn. He avoids even giving any opinion, knowing that

what he has here put together will sufficiently alarm the timid, and offend the prejudiced; but he rather supposes, that while husbandry is carried on by such corn-consuming means, no such plenty will result; because, under similar circumstances, with twelve hundred and eighty enclosures in the last twenty-seven years, no such plenty has resulted. The contest lies between vanity on the one part, and good policy and necessity on the other: it must decide itself.

The author ought to apologize for having gone more at length into these subjects than he at first intended; and whilst he regrets, that, circumstanced as he was, more could not be done, he derives some comfort from the reflection, that, with unwearied diligence, he sought out practical and unassuming men, who best know how to serve the cause of husbandry: that to the utmost of the small means allotted, he endeavoured to reward them; and, without partiality to any man or any system, with truth it may be added,

that, looking for no reward, he laboured night and day to discharge the duties imposed on him with diligence and fidelity.

POSTSCRIPT.

IT has in the course of this work been stated, that a flock of Spanish sheep, of the true Merino breed, has been imported: a large portion of which were males, for the use of those various districts, into which they may with great profit be introduced. The author is at a loss to fix a price on animals of such a description. He values his own labour at nothing, but as others must have been paid in proportion to the penalty, they were in danger of, which was no less than death, on discovery, he naturally looks to be in some part repaid the heavy expenses he has incurred. He is, therefore, advised to fix from twenty to thirty guineas for each of seven rams, in proportion to their quality, and from ten to fifteen guineas each for such ram-lambs, as, without injury to his own flock, he can afford to spare. Reference may be made to Mr. John Tyler, Fitzhead, Wellington, Somerset.

Though it may be against the author's interest to say so, on a careful comparison of the wool, from Dr. Parry's Spanish flock, near Bath, with samples of his own, he finds little, if any, difference whatever: of the carcase no comparison has yet been made. This fact will find confirmation, if any be needed, by

the following statement just received by the author from Sir George Montgomery:

In the year 1798, the Wool Society of Scotland disposed of their several flocks; the Lord Chief Baron, a member of the Society, purchased the Spanish and South Downs, which he has since kept in a very high and exposed farm in Twedale: from a comparison of the fleeces clipped the year of obtaining them, and the fleeces of the same sheep this year, he is confirmed, on comparison, that they have increased in fineness, beyond his expectation; and the hogs clipped this season promise to equal the originals, which were supposed to be of the best breed in Spain: the fleece from one of the hogs was shown a shawl-manufacturer in Edinburgh, who declared it the finest Spanish wool he had ever seen.

Particulars of Two Wether Sheep of the Ryeland and Spanish Cross, communicated by Mr. Ridgeway, whose Property they were.

1798.

			£.	s.	d.
A two-sheer sheep, clipped	8 lb. of wool	value	1	4	0
Weight of the sheep	86 lb.	—	3	15	0
Weight of ruff fat	16 lb.	—	0	14	0

1800.

			£.	s.	d.
A two-sheer sheep, clipped	7½ lb. of wool	value	1	2	6
Weight of sheep	10 stone	—	3	10	0
Weight of ruff fat	14 lb.	—	0	13	2

Carcase, handsome, short, and square, and short-legged.

THE END.

Printed by S. Gosnell,
Little Queen Street, Holborn.

DIRECTIONS FOR THE PLATES.

Plate * to front page 33
Plate I. — 151
II. — 153
III. — 156
IV. V. VI. — 161

B L